

POCKET-BOOK  
ON  
TRANSPORT IN INDIA  
1962-63.



TRANSPORT RESEARCH DIVISION

MINISTRY OF SHIPPING & TRANSPORT

NEW DELHI

FEB., 1964

**SYNOPSIS OF POCKET-BOOK ON TRANSPORT IN INDIA  
1972-73**

The publication brings together in one place, key statistics relating to all modes of transport *Viz* Roads and Road Transport, Railways, Ropeways, Air Transport, Ports and Shipping, Inland Water Transport and other modes of transport including pipeline and bicycles. It is an annual publication which was started in 1968 and this is the sixth issue and gives information for 1972-73.

This Pocket Book is intended to serve as a compact source of reference on the transport economy of India. It is divided into three parts : Part I describes the National economy and Transport resources and Part II the individual transport systems, Air, Rail, ropeways, Road, Inland Water Transport and Coastal and Overseas Shipping. Part III deals with Plan outlays and expenditures on the different modes of transport and also gives comparative statistics on transport in different countries to the extent available. This publication, we hope, will meet the needs of those who do not have easy access to more detailed publications for reference.

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—Means nil.

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PART 1

TRANSPORT & NATIONAL ECONOMY

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## POLITICAL AND ADMINISTRATIVE FRAME-WORK

1. India is the seventh largest country in the world with a geographical area of 3·27 million square Kms. Her land frontier is 15,168 kilometres long and coast-line about 5,689 kilometres. The distance from North to South measures some 3,219 kilometres and East to West 2,977 kilometres.

India has a written Constitution which came into force on January 26, 1950. Citizens have certain Fundamental Rights; Right to Equality, Right to Freedom, Right against Exploitation, Right to Freedom of Religion, Cultural and Educational Rights, Right to property and Right to constitutional remedies. The Fundamental rights are justiciable.

The Constitution lays down certain Directive principles of State Policy. Though not justiciable, they are regarded as "fundamental in the governance of the country." They seek to ensure that the State shall strive "to promote the welfare of the people by securing and protecting as effectively, as it may, social order in which justice—social, economic and political—shall inform all the institutions of the national life."

India is a Union of 21 Federative States and 9 centrally administered Union Territories, with the President as the Head of the Union and the Governors as the Heads of the States. The President is selected by the elected members of both Houses of Parliament and Legislative Assemblies of the States for a term of five years. All executive authority of the Union, including the Supreme Command of the Defence Forces formally vests in the President and all executive actions of the Government are taken in his name. In the exercise of his functions, the President is aided and advised by the Council of Ministers (i.e. the Cabinet) with the Prime Minister as the head. The Cabinet finally determines and lays down the policy of the Government. The Cabinet is collectively responsible to the Union Parliament. The Indian Parliament consists of two Houses. The Upper House called the Council of States (Rajya Sabha) consists of not more than 238 elected representatives of States and Union Territories and 12 members nominated for their special knowledge and practical experience in the fields of literature, science, art and social services. The Lower House called the House of the People (Lok Sabha) consists of not more than 500 members elected from territorial constituencies in the States and not more than 25 members representing the Union Territories. All laws are enacted by Parliament, whose consent is also necessary for the levying of taxes and sanctioning of Government expenditure.



The States like the Centre, have a parliamentary system of government. The Governor of a State is appointed by the President and is aided and advised by a Council of Ministers headed by the Chief Minister. The Council works on the principle of collective responsibility and is accountable to the Legislature of the State. Most State legislatures have, like the Union Parliament, two Houses: The Legislative Assembly and the Legislative Council.

The Supreme Court of India consists of a Chief Justice and not more than thirteen judges appointed by the President. There is a high Court in each State which stands at the head of the State's judicial administration. Each High Court consists of Chief Justice and a number of judges appointed by the President. The judiciary is independent of the executive and the legislature.

## 2. Administrative units

The principal unit of administration in India is the district under a Collector and District Magistrate. As Collector he is responsible for the proper Collection of revenue and for the administration of all matters connected with land except certain technical aspects of irrigation, agriculture and forestry. As District Magistrate he is responsible for the maintenance of law and order and the criminal administration of the District.

The Collector is also the Chief Development Officer of the District and is assisted in many States by Additional Collectors and District Development or Planning Officers. District Development or Planning Committees on which all members of the State Legislature and Parliament from the Districts representative of Zila Parishads and Municipal Committees and leading non-official workers are represented, ensure popular association with the formulation and implementation of development programmes.

Local self-governing institutions in India are broadly classified into two categories urban and rural. In the big cities, they are known as Corporations and in medium and small towns as Municipal Committee or Boards. The institutions looking after the civic needs of the rural areas, hitherto known as the District Boards have undergone a significant change in the recent past. With the introduction of democratic decentralisation in the States, there have been set up the Panchayats at the village level, the Block Panchayat Samities at the Development Block level and the Zila Parishads at the district level. This three-tier machinery not only looks after the civic activities of the local level but is also associated with the preparation and execution of local development plans.

Parliament has exclusive power to make laws on matters enumerated in Union List. Parliament and also the Legislature of any Part State have power to make laws on any of the matters enumerated in the Concurrent List. Subject to the afore-mentioned clauses the Legislature of State has exclusive power to make laws for such State or any part.

hereof with respect to any of the matters enumerated in the State List. Parliament has power to make laws with respect to any matter for any part of the territory of India not included in the First Schedule not with standing that such matter is a matter enumerated in the State List. The matter directly relating to transport which are enumerated in the Union List in the Seventh Schedule of the Constitution of India are :

- (1) Railways.
- (2) Highways declared by, or under law made by Parliament to be national highways.
- (3) Maritime shipping and navigation, including shipping and navigation on tidal waters; provision of education and training for the mercantile marine and regulation of such education and training provided by States and other agencies.
- (4) Light houses, including lightships, beacons and other provisions for the safety of shipping and aircraft.
- (5) Ports declared by or under law made by Parliament or existing law to be major ports, including their delimitation and the constitution and powers of the port authorities therein.
- (6) Port quarantine, including hospital connected therewith; seamen and marine hospitals.
- (7) Airways aircraft and air navigation provision of aerodromes; regulation and organisation of air traffic and of aerodromes provision for aeronautical education and training and regulation of such education and training provided by States and other agencies.
- (8) Carriage of passengers and goods by railways, sea or air or by national waterways in mechanically propelled vessels.
- (9) Inter-State trade and commerce.
- (10) Regulation and development of inter-State rivers and river valley to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest.
- (11) Terminal taxes on goods or passengers, carried by railway, sea or air; taxes on railway fares and freights.
- (12) Inquiries, surveys and statistics for the purpose of any of the matter in this list.

The matters relating to transport as enumerated in the State List are as under :—

- (1) Communications that is to say, roads, bridges, ferries, and other means of communication not specified in the Union List; municipal tramways; ropeway; inland water-ways and traffic thereon subject to the provisions of Union List and Concurrent List with regard to such waterways; vehicles other than mechanically propelled vehicles.
- (2) Taxes on goods and passengers carried by road or on inland waterways.
- (3) Taxes on vehicles, whether mechanically propelled or not, suitable for the use on roads, including tramcars subject to the provision of entry (4) of Concurrent List.
- (4) Taxes on animals and boats.
- (5) Tolls.

The matters relating to transport as enumerated in the Concurrent List are as follows:—

- (1) Economic and social planning.
- (2) Ports other than those declared by or under law made by Parliament or existing law to be major ports.
- (3) Shipping and navigation on inland waterways as regards mechanically propelled vessels, and the rule of the road on such waterways and the carriage of passengers and goods on inland waterways subject to the provision of Union List with respect to national waterways.
- (4) Mechanically propelled vehicles including the principles on which taxes on such vehicles are to be levied.
- (5) Inquiries and statistics for the purpose of any of the matters specified in State List or Concurrent List.

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## SECTION-I. ECONOMIC STRUCTURE AND ACTIVITIES

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TABLE No. 1(1)

DECENNIAL GROWTH OF POPULATION OF INDIA IN THE RURAL  
AND URBAN AREAS

(1911-1971)

Census Year	Rural Areas		Urban Areas		All India	
	(million)	Decennial change%	(million)	Decennial change%	(million)	Decennial change%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1911	225.6	..	26.5	..	252.1	..
1921	222.7 (—)	1.3	28.7 (+)	8.3	251.4 (—)	0.3
1931	245.2 (+)	10.1	33.8 (+)	17.8	279.0 (+)	11.0
1941	274.4 (+)	11.9	44.3 (+)	31.1	318.7 (+)	14.2
1951	298.6 (+)	8.7	62.5 (+)	41.1	361.1 (+)	13.3
1961	361.0 (+)	20.9	78.2 (+)	25.1	439.2 (+)	21.5
1971	438.8 (+)	21.8	109.1 (+)	37.8	547.9 (+)	24.7

TABLE No. 1(2)

POPULATION, AREA AND ADMINISTRATIVE UNITS—  
STATEWISE (1971)

State/Union Territory	Popula- tion (Milli- ons)	% of rural to total popula- tion	Popula- tion density per km.	Geog- raphical Area ('000 Sq. kms.)	No. of Distri- cts	No. of town
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh . . .	43.5	80.7	157	277	21	224
Assam . . . . .	15.0*	90.7	150	100	10	74
Bihar . . . . .	56.4	89.9	324	174	17	202
Gujarat . . . . .	26.7	71.9	136	196	19	216
Haryana . . . . .	10.0	83.0	227	44	7	65
Himachal Pradesh . . .	3.5	9.4	63	56	10	36
Jammu and Kashmir . .	4.6	82.6	—	222@	10	45
Kerala . . . . .	21.3	84.0	549	39	10	88
Madhya Pradesh . . .	41.7	83.7	94	443	43	249
Maharashtra . . . . .	50.4	68.9	164	308	26	289
Manipur . . . . .	1.1	81.8	49	22	5	10
Meghalaya . . . . .	1.0	90.0	45	22	2	6
Mysore . . . . .	29.3	76.0	53	192	19	245
Nagaland . . . . .	0.5	90.4	29	17	3	3
Orissa . . . . .	21.9	91.4	140	156	13	81
Punjab . . . . .	13.5	75.7	270	50	11	108
Rajasthan . . . . .	25.8	82.2	75	342	26	152
Tamil Nadu . . . . .	41.2	69.6	317	130	14	418
Tripura . . . . .	1.6	87.5	160	10	3	6
Uttar Pradesh . . . . .	83.3	86.1	300	294	54	325
West Bengal . . . . .	44.3	75.2	503	88	16	226
Union Territories . . .	6.3	31	64	98	12	29
<b>Total</b> . . . . .	<b>547.9</b>	<b>80</b>	<b>167</b>	<b>3,280</b>	<b>351</b>	<b>3097</b>

\* Includes Mizo district, now constituted as Union Territory of Mizoram.  
 @ 81,112 Sq. Km., the area under illegal occupation of Pakistan.

TABLE No. 1(3)

**PERCENTAGE DISTRIBUTION OF VILLAGES IN INDIA BY PRINCIPAL MODES OF CONVEYANCE USED TO REACH SOME NEAREST CENTRES OF HEALTH, EDUCATION, COMMUNICATION AND ADMINISTRATION**

Administrative, education, health & communication centres	Av. distance (in miles)	% of villages using the conveyance of						Total
		Railway train	Motor bus or car	Animal drawn cart, cycle & rickshaw	Walking	Other types	Not known	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Police Station	8.2	2.4	18.9	2.7	52.3	23.2	0.5	100.00
Hospital	8.0	2.5	21.6	2.9	44.2	28.3	0.5	100.00
High School	10.2	3.5	23.2	2.7	43.8	25.6	1.2	100.00
Telegraph Office	11.5	2.3	30.8	2.1	37.9	26.5	0.4	100.00
Railway Station	20.2	—	41.5	3.4	30.0	22.4	2.7	100.00
Distt. Headqtrs.	30.3	17.0	43.3	1.2	8.6	20.2	0.9	100.00

Source:—National Sample Survey (11th round)

August, 56—Jan., 57

TABLE No. 1(4)

**AVERAGE DISTANCES OF VILLAGES IN INDIA TO NEAREST CENTRES OF HEALTH, EDUCATION AND COMMUNICATION  
(ALL-INDIA)**

(In Kms)

Villages with population	Av distance of villages to				
	Primary School	High School	Hospital	Post Office	Tele- graph office
(1)	(2)	(3)	(4)	(5)	(6)
up to 200 . .	3.6	20.9	15.8	7.7	21.7
201—500 . .	1.9	14.8	12.7	5.1	16.7
501—1000 . .	1.1	14.3	13.7	5.6	15.9
1001—2000 . .	0.6	11.7	12.2	3.5	15.1
2001 and above .	0.5	9.3	11.4	1.0	12.9
All classes . .	1.9	16.1	13.8	5.8	17.9

SOURCE :—National Sample Survey (12th round)  
Feb. '57—Aug. '57.



TABLE No. 1(5)

PERCENTAGE DISTRIBUTION OF ESTIMATED NUMBER OF VILLAGE BY DISTANCE FROM THE NEAREST CENTRE (July, 1967-June, 1968)

Distance from the nearest Centre	Communication and administrative Centre							
	Post Office	Chari-table Dispensary	Family Planning	Market	Agriculture Extension Office	Drinking water supply	Cold storage	Fertiliser Depot
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Within Village	14.87	3.17	1.86	7.23	0.79	76.26	0.87	3.35
Within 5 Kms.	67.33	27.98	19.53	43.44	13.00	84.48	2.99	18.82
Above 15 Kms.	3.88	19.43	18.12	11.41	37.76	3.26	61.45	41.42

Source :—NSS—22nd Round July, 1967 to June 1968, November 219.

TABLE No. 1(6)  
EMPLOYMENT IN THE PUBLIC SECTOR

('000 numbers)

	At the end of March					
	1961	1966	1969	1970**	1971**	1972*£
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>A. By Branch of the Public Sector :—</b>						
Central Government	2090	2636	1713	2725	2771	2838
State Government	3014	3723	3901	3997	4152	4265
Quasi-Government establishments	773	1318	1655+	1794	1929	2163
Local Bodies	1173	1701	1825	1858	1878	1922
<b>Total</b>	<b>7050</b>	<b>9378</b>	<b>10095+</b>	<b>10374</b>	<b>10731</b>	<b>11169@</b>
<b>B. By Industrial Classification :—</b>						
Agriculture, livestock, forestry and fishing	120	226	261	264	276	283
Mining and quarrying	129	160	160	174	182	255*
Manufacturing	369	670	757	782	806	870
Construction	603	756	783	797	880	915
Electricity, gas, water & railway service	224	303	369	402	434	458

TABLE NO. 1 (b) - *Contd.*

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Trade and commerce	94	155	264+	288	328	374
Transport, storage and communications	1724	2094	2160	2188	2216	2249
Services	3727	5004	5321	5475	5607	5785
Total	7050	9378	10095+	10374	10731	11169@

LP Provisional.

+ Figures derived after the transfer of the employment data of the 14 nationalised Banks from Private to Public Sector.

\* The sudden rise in employment in the public sector was mainly caused by the take over of cooking coal mines by the Govt. and the consequent transfer of employment from private to public sector.

\*\* Included employment data in respect of the UT of Goa, Daman and Diu. Since March, 1970 onwards.

@ Figures for Manipur have been repeated & the figures for Mizoram not taken into account due to non-receipt of returns.

Note:—The figures may not necessarily add up to the total due to rounding off.

TABLE No. 1 (7)

## EMPLOYMENT IN THE PRIVATE AND PUBLIC SECTOR

(In lakhs)

Sl. No.	1970**			1971**			1972***			
	Public	Private	Total	Public	Private	Total	Public	Private	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Plantation Forestry <sup>(2)</sup>		2.64	0.20	10.84	2.76	0.00	10.76	2.03	0.10	10.93
2 Mining and Quarrying		1.77	4.30	6.07	1.02	4.10	5.92	2.55	3.50	6.05
3 Manufacturing		7.02	39.00	46.82	8.06	39.70	47.76	8.70	39.70	48.40
4 Construction*		7.97	1.50	9.47	0.00	1.40	10.20	9.15	1.70	10.85
5 Electricity, gas & Water etc.		4.02	0.40	4.42	4.34	0.50	4.84	4.58	0.50	5.08
6 Trade & Commerce		2.08	2.90	5.78	3.28	3.00	6.28	3.74	3.00	6.74

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
7 Transport & communications . . . . .										
		21.88	1 00	22.88	22.16	1.00	23.16	22.19	9.60	23.29
8 Services . . . . .		51.75	9.60	61.35	56.07	10.00	66.07	37.85	10.30	68.55
<hr/>										
Total . . . . .	103.74	67.00	170.74	107.31	67.60	174.91	111.89	67.50	179.39	

Note.—The figures may not necessarily add up to the total due to rounding off.  
 & Provisional.

@ This includes most of the plantations excluding coffee plantation in which case the coverage is inadequate.

\* Coverage in construction particularly on private account is known to be inadequate.  
 + @ Figures for Mizoram have been repeated and those for Mizoram not taken into account due to non-receipt of return.

\*\* Includes employment data in respect of the U.T. of Goa, Daman and Diu from March, 1970 onwards.  
 + + The sudden decline in employment in the private sector was mainly caused by the takeover of cooking coalmines by the Govt. and the consequent transport employment from private to public sector.

TABLE No. 1 (B)  
NET DOMESTIC PRODUCT AT CURRENT AND CONSTANT PRICES  
(STATE-WISE)

(Rs. in Abja)

State	1965-66		1968-69		1970-71	
	At current prices	At constant prices	At current prices	At constant prices	At current prices	At constant prices
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh@	15.21	10.83	19.98	11.20	23.46	12.89
Assam*	5.61	3.70	2.10	4.20	8.17	4.27 (Base— 69-70)
Bihar@	16.47	10.97	21.46	11.51	21.93	11.23 (Base— 69-70)
Gujarat@	11.46	8.67	15.82	9.14	20.84	11.22
J. & K. @	1.43	1.80	2.15	1.31	..	...
Haryana @	3.89	2.75	5.95	3.31	8.21	4.32
Himachal Pradesh @	0.65	0.40 (Base— 50-51.)	1.79	1.05	..	1.10
Kerala @	7.83	5.03	10.20	5.28	12.44	...
Madhya Pradesh £	12.59	8.12	18.77	9.65	22.76	10.95
Maharashtra @	23.55	17.04	33.23	20.07	38.58	20.71
Mysore ££	10.12	6.37	13.68	7.97	14.97	8.58

TABLE No. 1(8)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Orissa @	6.33	4.49	9.36	5.21	9.91	5.57 (Base— 69-70)
Punjab @	7.15	5.00	12.37	6.32	19.68	6.81 (Base— 69-70)
Rajasthan **	8.45	5.33	10.15	6.06	14.88	7.59
Tamil Nadu @	15.87	12.88	21.00	14.34	26.49	15.99
Uttar Pradesh @	29.66	19.96	40.22	21.67	45.80	24.21
West Bengal @	16.07	13.14	20.72	14.09	23.02	14.89
Manipur @	0.33	0.22	0.59	0.25	0.54	0.23
Delhi @	3.24	2.54	4.62	2.94	5.66	3.23
Tripura @	0.46	0.35	0.71	0.36	0.76	0.38

@ For Constant Prices (Base : 1960-61).

\* For Constant prices (Base : 1948-49).

£ For constant prices (Base : 1952-53).

££ For constant prices (Base : 1956-57).

\*\* For constant prices (Base : 1954-55).

NOTE.—Owing to the differences in concepts, methodology and source material used the figures for different states are not strictly comparable.

TABLE No. 1 (9)

NATIONAL ECONOMIC STRUCTURE AND ACTIVITIES—SELECTED INDICES  
(1950-51 = 100)

Item	1950- 1951	1955- 1956	1960- 1961	1965- 1966	1966- 1967	1967- 1968	1968- 1969	1969- 1970	1970- 1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>1 Main Economic Indicators</b>									
Population (a)	...	107.3	119.1	192.5	133.5	130.5	141.6	141.0	148.1
Net National Product (Revised series) (b)	...	...	100.0	113.0	111.7*	125.3*	128.3*	135.1*	...
Per Capita Net National Product (Revised Series) (b)	...	...	100.0	101.3	100.5*	107.5*	107.7*	110.0*	...
Agricultural Production Total	100.0	122.2	140.7	139.2	137.7*	160.5*	166.0*	170.7*	190.6
Industrial Production (c)	...	72.7	100.0	153.8	152.6	151.4	161.1	172.5	180.8

\* Provisional.

(a) Indices are based on mid-year estimates, i.e. on 1-7-50 for 1950-51.

(b) At 1960-61 Prices.

(c) Figures relate to calendar years with 1960 = 100. Indices from 1960 to 1969 are based on regular monthly items while those for year upto 1960 (base-year) include additional items not covered in monthly index.

...Not available.



TABLE No 1(a)—Contd.

Item	1930- 1951	1955- 1956	1960- 1961	1965- 1966	1966- 1967	1967- 1968	1968- 1969	1969- 1970	1970- 1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Wholesale Prices .	100.0	82.7	111.7	147.3	167.7	187.2	185.1	192.0	202.7
Consumer Prices (Working Class) .	100.0	94.1	121.6	165.7	187.3	208.8207.8(d)210.6(c)			221.6
Imports (Value) .	100.0	104.4	175.3	214.4	319.6@	308.8	293.5	241.1	158.7
Exports (Value) £ .	100.0	99.3	109.9	134.8	192.6	199.6	226.2	235.3	162.3
Money supply with the public .	100.0	110.0	112.3	224.7	245.5	265.4	286.7	316.5	353.9
Outlay on public Sector (Under 5 year plan) % .	...	236.5	412.6	890.4	833.8	803.1	915.2	840.6	1,017.9
<b>II Economic Structure</b>									
area shown (act) .	100.0	108.8	112.2	114.7*	115.6*	117.7*	115.8*	117.1*	...
Electricity Installed Capacity (g) .	100.0	148.6	245.8	439.5	493.7	573.9	621.7*	613.9*	708.7*
Railway—Capital at charge .	100.0	116.4	182.3	230.6	339.8	356.1	370.8	382.0	398.2

TABLE No 1(2)—Contd.

Item	1950- 1951	1955- 1956	1960- 1961	1965- 1966	1966- 1967	1967- 1968	1968- 1969	1969- 1970	1970- 1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Railways—Route Kilometres	100.0	101.9	103.9	107.7	107.7	100.2	109.4	109.7	109.4
Road Transport Kilometres of roads, 100.0	100.0	103.7	118.7	138.7	144.2	149.7*	148.6*	148.4*	...

\* Including Re-exports.

@ Value figures for April- May 1966 have been converted into devalued rupees.

% 1951-52=100.

\* Provisional.

(g) Figures relate to calendar years upto 1956 and financial year from 1957-58 onwards with base 1950=100.

(d) Average based on months figures in the interim series and 8 months figures as estimated from new series of index on base 1960=100.

(e) Average based on figures as estimated from the new series of index on base 1960=100.

-- Not Available.

TABLE No. 1(9)—Contd.

Item	1950- 1951	1953- 1955	1950- 1951	1953- 1955	1956- 1957	1957- 1958	1958- 1959	1959- 1970	1970- 1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>II Economic Structure—(Contd.)</b>									
Road Transport— Expenditure on Roads . . .	100.0	230.4	313.4	521.2	481.2	515.6	569.7*	581.8*	...
Road Transport— Number of Motor Vehicles(h) . .	100.0	138.9	216.9	358.8	388.6*	435.0*	476.2*	521.1*	...
Shipping—Gross Registered Ton- nage(100 G.R.T. and above(i)) .	100.0	132.4	230.6	458.7	482.9	517.6	576.6	613.6	...
Posts and Tele- graphs—Number of Post Offices (Urban) . . .	100.0	123.8	138.6	168.7	174.5	172.5	182.4	187.2	193.5

h Motor vehicle taxed and tax exempted during last quarter of financial year 1953-54.

\* Provisional.

i Figures relate to calendar years upto 1956 and financial years from 1957-58 onwards with base 1950=100.

... Not Available

Item	1950- 1951	1955- 1956	1960- 1961	1965- 1966	1966- 1967	1967- 1968	1968- 1969	1969- 1970	1970- 1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Posts and Telegraphs—Number of Post Offices (Rural)	100.0	157.4	223.6	285.7	317.6	294.4	301.3	308.5	320.8
<b>III Economic Activity</b>									
Electricity Generated	100.0	161.9	306.1	388.6	616.2	689.2	785.4	956.5	...
Mineral Production (Value of Mineral Output)	...	...	100.0	178.0	200.0	299.0	256.0	226.0	298.0
Despatches of coal by Industries (1)	100.0	126.9	176.7	253.0	256.3	236.5	272.1	277.1	275.2
Railways—Net Tonnes Kms.	100.0	135.0	198.7	264.9	264.2	269.3	283.4	290.5	298.5
Railways—Passenger Kms.	100.0	93.8	116.4	144.3	153.0	160.3	160.0	169.6	176.4
Railways—Goods originating	100.0	124.5	168.1	217.0	216.0	210.6	217.0	227.3	239.6
Railways—Passenger originating	100.0	99.2	123.4	160.9	169.2	174.0	170.5	180.2	186.5

(2) Figures relating to calendar year with base 1960=100.

TABLE No. 1(9)—Contd.

Item	1957- 1951	1955- 1956	1960- 1961	1963- 1964	1966- 1967	1967- 1968	1968- 1969	1969- 1970	1970 1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>III Economic Activity (Contd.)</b>									
Railways—Goods carriage	100.0	127.3	201.2	324.1	335.2	350.4	392.8	414.1	430.20
Railways—Passen- ger carriages	100.0	109.6	133.6	222.1	232.3	255.6	268.2	282.6	298.1
Aviation—Passen- ger carried (inter- nal)(1)	100.0	101.0	211.2	371.6	416.2	497.2	577.2	677.2	700.6
Aviation—Freight carried (internal) (1)	100.0	122.9	99.1	51.8	35.4	37.8	40.5	50.3	45.2
Shipping—Cargo handled at Major ports	100.0	127.5	176.3	223.2	242.8	241.3	235.4	227.5	221.4
Tourism—No. of tourists coming to India (1)	...	197.7	731.4	878.8	918.4	1067.0	1122.0	1451.2	1663.7
Employment in Railways	100.0	111.7	126.0	147.2	148.5	148.2	147.3	147.6	...
Average daily Em- ployment in all mines(1)	100.0	125.2	138.2	146.5	148.2	142.3	136.6	135.3	132.6*

(1) Figures relate to calendar year with base 1950=100

(1) Figures relate to calendar year with base 1951=100

\* Not Available.

TABLE No. 1(9)—Contd.

Item	1950- 1951	1955- 1956	1960- 1961	1965- 1966	1966- 1967	1967- 1968	1968- 1969	1969- 1970	1970- 1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>III. Economic Activity—(Contd.)</b>									
Estimated Employment in Public Sector <sup>(a)</sup>	...	..	100.0	131.3	110.9	144.7	117.2	131.6	155.8
Estimated Employment in Private Sector <sup>(b)</sup>	...	...	100.0	120.0	133.3	130.0	128.6	133.3	132.9
Central Govt. Revenue	100.0	118.6	216.2	371.7	609.4	629.2*	680.0*	716.0*	811.1
Central Govt. Expenditure	100.0	127.1	238.3	377.1	617.3	706.7*	772.8	837.3*	903.0
Public Debt of Central Government	100.0	127.0	250.0	430.0	520.3	582.4	620.6	645.5	695.7
Net Domestic Product by Agriculture, Animal Husbandry etc (Revised Series) <sup>(1)</sup>	...	...	100.0	134.4	94.1*	110.6*	110.6*	116.2*	..

TABLE No. 1(2)—Contd.

Item	1950- 1951	1953- 1956	1960- 1961	1965- 1966	1966- 1967	1967- 1968	1968- 1969	1969- 1970	1970- 1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>(B) Economic Activity—(Contd.)</b>									
Net Domestic Product from Mining, Manufacturing and small enterprises (Revised Series)(1)	..	..	100.0	134.1	136.7*	142.1*	146.6*	151.7*	..
Net Domestic Product from Commerce, Transport and Communication	..	..	100.0	131.7	135.5*	140.7*	146.5*	154.2*	..
Net National Product from other services/ (Revised Series)(1)	..	..	133.0*	142.8*	151.4*	159.3*	.	.	..
	..	..	100.0	132.6					

@Figures relate to calendar year with base 1960=100.

...Not available.

(k) Figures relate to calendar years with 1961=100.  
Provisional.

\*Base 1951-52=100

TABLE No. 1 (9)—Contd

Item	1940- 1951	1955- 1956	1959- 1961	1965- 1966	1966- 1967	1967- 1968	1968- 1969	1969- 1970	1970- 1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>III. Economic Activity—(Contd.)</b>									
Net National Pro- duct at current prices (Revised Series)	.	..	100.0	155.1	179.8*	213.4	215.7*	234.5*	..
Per capita Net Na- tional Product at current prices (Re- vised Series)	.	.	100.0	139.7	157.7*	183.1*	181.1*	192.1*	...
Gross Capital Ex- penditure of Public authorities at cur- rent prices (Revi- sed Series)	.	.	100.0	178.9	161.9*	187.4*	180.7	.	...
Unit Value Index of imports	100.0	57.2	57.8	62.6	92.2	81.9	81.9	84.3	88.6
Quantum Index of Imports	100.0	109.2	168.4	207.6	196.0	218.4	198.7	168.4	167.1
Unit value Index of Exports	100.0	93.3	105.8	108.6	162.5	162.5	159.6	164.4	166.3



TABLE No. 1(9)—Contd.

Item	1950- 1951	1955- 1956	1960- 1961	1965- 1966	1966- 1967	1967- 1968	1968- 1969	1969- 1970	1970- 1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>III. Economic Activity—(Contd.)</b>									
Quantum Index of									
Exports	100.0	101.0	95.2	118.1	113.3	116.2	135.2	136.2	145.7
Balance of Pay- ments Total Cur- rent Transaction									
(Net)	100.0	17.2	1008.7	1259.1	2087.9*	2067.6*	938.8*	557.8*	851.9*

\*Provisional.

Not available.

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## SECTION 2 : TRANSPORT RESOURCES

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TABLE No. 2(1)

ROADS, NAVIGABLE LENGTHS OF WATERWAYS AND MOTOR  
VEHICLES ON ROAD (STATE-WISE)

State	Navigable length of rivers & canals (In Kmt.)	Surfaced road (In Kmt.) As on 31-3-72	Buses, Goods & Miscellaneous Vehicles (as on 31st March 1971)		
			Buses	Goods Vehicles	Misc. Vehicles
(1)	(2)	(3)	(4)	(5)	(6)
Andhra Pradesh	1999	48120	7055	19703	13338
Assam	1993	6609	2659	14679	7240
Bihar	1262	39922	1522	16237	4782
Gujarat	286	21898	5563	32414	14069
Karnataka	444	54903	6660	19720	10034
Kerala	1540	43864	6563	13162	3360
Manipur	...	1056	230	795	199
Maharashtra	501	46371	10739	58361	18195
Nagaland	...	928	70	1424	81
Orissa	985	10827	1861	8311	2892
Tamil Nadu	216	52644	7534	17600	3851
Uttar Pradesh	2441	36437	(8139)	(25740)	(5386)
West Bengal	2337	20168	(8760)	(35368)	(18820)

Note:—Figures in brackets are estimated.

TABLE No. 2(2)  
CRUDE OIL & PRODUCT PIPE LINES IN INDIA

Pipe Lines	Length (In Kms.)	Diameter (In Inches)
(1)	(2)	(3)
<b>I. Crude Pipelines</b>		
(i) Digboi Oil Field—Digboi Refinery . . . . .	12	6
(ii) Digboi Oil Field—Digboi Refinery . . . . .	11	4
(iii) Nahorkatiya-Gauhati . . . . .	401	16
(iv) Gauhati-Barauni . . . . .	756	14
(v) Ankleshwar-Koyali . . . . .	98	16
(vi) Lakwa-Moran . . . . .	17	12.75
(vii) Kalol-Nawagaun . . . . .	55	12.75
(viii) Nawagaun-Koyali . . . . .	80	14
(ix) Nahorkatiya-Digboi . . . . .	31	8
(x) Haldia-Barauni . . . . .	524	12.75
Total Crude Pipe Lines . . . . .	1,985	
<b>II. Product Pipelines</b>		
(i) Digboi Refinery-Tinsukia . . . . .	34	6
(ii) Digboi Refinery-Tinsukia . . . . .	37	6
(iii) Digboi Refinery-Tinsukia . . . . .	34	4
(iv) Gauhati-Siliguri . . . . .	425	8.62
(v) Barauni-Kanpur . . . . .	668	12.75
(vi) Koyali-Ahmedabad . . . . .	114	8.62
(vii) Haldia-Maurigram . . . . .	118	12.75
Total Product Pipelines . . . . .	1,430	
<b>III. Gas Pipelines</b>		
(i) Cambay-Dhuvaran . . . . .	25	14
(ii) Ankleshwar-Uttaran . . . . .	42	16
(iii) Ankleshwar-Baroda . . . . .	98	14
Total Gas Pipelines . . . . .	165	
Total (I+II+III) . . . . .	3,580	

Source : —Indian Petroleum and Chemicals Statistics—1972.

TABLE No. 2(3)

## REFINERY PRODUCTION—1965 TO 1972

('000 tonnes)

Product	1965	1970	1971	1972
(1)	(2)	(3)	(4)	(5)
I. Light Distillates . . . .	1657	3014	3087	3165
II. Middle Distillates . . . .	4122	8535	9368	9400
III. Heavy Ends . . . . .	3334	5628	5774	5639
1. Furnace Oil . . . . .	2352	3117	2910	2308
2. L.S.H.S. . . . .	31	928	1006	1091
3. H. H. Stork . . . . .	235	194	182	289
4. Lub. Oils@ . . . . .	42	236	218	308
5. Bitumen . . . . .	549	765	982	1090
6. Petroleum Coke . . . . .	81	149	145	132
7. Wax . . . . .	40	37	39	51
8. Others . . . . .	4	202	292	370
IV. Crude Throughput . . . . .	9754	18459	19588	19672

@Excluding production of Lube Oil by M/s Lube India Ltd.

Source:—Indian Petroleum &amp; Chemicals Statistics—1972.

TABLE No. 2(4)  
ESTIMATED INDUSTRY-WISE CONSUMPTION OF FUEL OILS

Industry	1970		1971	
	Consumption ('000 tonnes)	% to total	Consumption ('000 tonnes)	% to total
(1)	(2)	(3)	(4)	(5)
<i>Transport:</i>				
Road Transport . . . .	3	0.1	13	0.3
Railways . . . . .	55	1.2	57	1.1
Waterways: . . . . .	424	9.1	449	9.0
Coastal & Inland . . . .	198	4.3	245	4.9
International Bunkers . .	226	4.8	204	4.1
Total Transport . . . .	482	10.4	519	10.4
Agricultural Plantation .	178	3.8	199	4.0
Power Generation . . . .	1218	26.2	1289	25.9
Iron & Steel . . . . .	311	6.7	415	8.3
Textile . . . . .	590	12.7	524	10.5
Cement . . . . .	129	2.6	148	3.0
Ceramics & Glass . . . .	155	3.3	202	4.1
& Allied Industries . .	493	10.6	495	9.9
Aluminium . . . . .	90	1.9	143	2.9
Non-ferrous Metals . . . .	91	2.0	120	2.4
& Quarrying . . . . .	39	0.8	41	0.8
Others . . . . .	45	1.0	52	1.1
Others . . . . .	310	6.8	248	5.0
	512	11.0	579	11.7
TOTAL . . . . .	4651	100.0	4974	100.0

Source:—Indian Petroleum & Chemicals Statistics—1972.

TABLE No. 2(5)  
PRICE BUILD-UP OF PETROLEUM PRODUCTS  
AS ON 1-1-1973

(Rs./K.L.)

	Bombay	Madras	Delhi	Kanpur	Calcutta
(1)	(2)	(3)	(4)	(5)	(6)
<i>1. Motor Spirit</i>					
Ex. M.I. Rate.	1205.03	1213.87	1205.03	1205.03	1228.08
State Surcharge	—	10.00	—	14.00	5.00
Railway Freight	—	—	87.40	92.82	—
Delivery charges within FDZ	11.36	11.36	11.36	11.36	11.36
Transportation charges for mean distance	—	—	—	—	2.88
Octroi/Local/Entry Tax	25.00	—	—	0.89	20.00
Net delivered rate exclusive of sales tax and dealers commissions	1241.39	1235.23	1303.79	1324.10	1267.32
Sales tax inclusive of surcharge	136.55	126.00	93.10	100.00	150.00
Dealers commission	41.80	41.80	41.80	41.80	41.80
Selling price to consumers	1419.74	1403.03	1438.69	1465.90	1459.12
Retail selling price per litre	1.43	1.41	1.44	1.47	1.46
<i>2. High Speed Diesel</i>					
Ex. M. I. Rate	708.47	719.89	708.47	708.47	720.66
State Surcharge	—	20.00	—	—	5.00
Railway Freight	—	—	62.97	66.19	—
Delivery charges within FDZ	7.27	7.27	7.27	7.27	7.27
Transportation charges for mean distance	—	—	—	—	2.88

TABLE No. 2(5)—*Contd.*

(1)	(2)	(3)	(4)	(5)	(6)
Octroi/Local/Entry/S.S.B.T. Tax	15.00	—	4.68	1.05	20.00
Net delivered rate exclusive of salestax & dealers commission .	730.74	717.16	783.39	782.98	755.81
Sales tax inclusive of surcharge .	65.77	105.00	55.94	70.00	100.00
Dealers commission . . . .	17.60	17.60	17.60	17.60	17.60
Service Charges . . . . .	—	—	—	—	20.00
Selling price to consumers .	814.11	869.76	856.93	870.58	893.41
Retail selling price per litre .	0.83	0.87@	0.86	0.88	0.90

3. *Light Diesel Oil*

Ex. M.I. Rate . . . . .	345.66	360.15	345.66	345.66	358.27
State Surcharge . . . . .	—	10.00	—	—	—
Railway freight . . . . .	—	—	64.60	68.24	—
Delivery charges within FDZ .	7.00	—	7.00	7.00	—
Octroi/Local/Entry/S.S.B.T. Tax.	10.00	—	4.82	1.09	20.00
Net delivered rate exclusive of sale tax & dealers commission .	362.66	370.15	422.37	421.99	378.27
Sales tax inclusive of surcharge .	18.13	105.00	21.54	70.00	100.00
Dealers commission . . . . .	6.60	6.60	6.60	6.60	6.60
Transportation charges . . . .	—	—	—	—	12.00
Selling price to consumers	387.39	481.75	450.51	498.59	496.87
Retail selling price per litre .	+	+	0.45	0.51	+



TABLE No. 2(5)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)
4. Furnace Oil					
Ex. M.I. Rate . . . . .	232.78	247.50	232.78	232.78	246.53
State surcharge . . . . .	—	30.00	—	—	—
Railway freight . . . . .	—	—	69.80	73.46	—
Delivery charges within FDZ . . . . .	6.25	6.25	6.25	6.25	6.25
Octroi/Local/Entry S.S.B.T. Tax . . . . .	14.97	—	5.18	1.16	20.00
Net delivered rate exclusive of sales tax & dealers commission . . . . .	254.00	283.75	314.01	313.65	272.78
Sales tax inclusive of surcharge . . . . .	12.70	20.83	16.01	10.98	16.70
Service charges . . . . .	—	—	—	—	9.00
Selling price to consumers . . . . .	266.70	304.60	330.02	324.63	298.48
Retail Selling price per 200 litres . . . . .	+	68.00	+	+	+
5. Superior Kerosene					
Ex. M.I. Rate . . . . .	540.51	550.93	540.51	540.51	555.09
State surcharge . . . . .	—	20.00	—	—	—
Railway freight . . . . .	—	—	55.31	58.00	—
Delivery charges within FDZ . . . . .	7.00	—	7.00	7.00	—
Octroi/Local/Entry/S.S.B.T. Tax . . . . .	10.00	—	12.50	0.99	—
Net delivered rate exclusive of Sales Tax & Dealers Commission . . . . .	557.51	570.93	615.32	606.50	555.09
Sales Tax inclusive of surcharge . . . . .	16.73	29.97	—	45.49	28.31
Dealers commission . . . . .	7.70	7.70	7.70	7.70	7.70
B.D.A. . . . .	—	—	—	—	3.30
Godown charges . . . . .	—	—	—	—	6.60

TABLE No. 2(5)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)
Transportation charges	—	—	—	—	7.99
Dealers' price to retailers	531.94	611.60	623.02	659.69	608.99
Retail selling price per litre	0.61	0.65	0.65	0.71	0.65
Selling price to consumers	531.94	611.60	623.02	659.69	605.30
6 Aviation Turbine fuel					
Ex. M.I. Rate	515.94	535.30	515.94	515.94	531.13
Railway Freight	—	—	59.13	63.40	—
Airfield charges	24.44	24.44	24.44	41.94	24.44
Octroi/Local/Entry/S.S.B.T Tax	10.00	—	12.50	—	20.00*
Net delivered rate exclusive of sales tax	550.38	559.74	612.01	621.28	578.57
Sales* Tax inclusive of surcharge	126.59	126.00	15.70*	100.00	120.00
Retail selling price to consumers	676.97	685.74	655.71	721.28	698.57

@ Plus 2 np service charges being recovered by same dealers

+ Retail price not given/fixed.

\* Aviation fuel sales to international flights are exempted from sales tax entry tax.

Source — Indian Petroleum and Chemical Statistics-1972.

TABLE No. 2(6)

## RETAIL SALE PRICE OF PETROL &amp; HSD IN VARIOUS TOWNS IN INDIA AS ON 31-12 1972

Towns	Price per kilolitre bullex Retail Pump out-let inclusive of Sales Tax	
	Motor Spirit (Rs)	H S.D (Rs)
(1)	(2)	(3)
Ahmedabad . . . . .	1301.51	781.95
Ajmer . . . . .	1338.52	797.04
Allahabad . . . . .	1350.13	785.27
Ambala (city) . . . . .	1364.14	815.41
Amritsar . . . . .	1376.22	823.77
Agartala . . . . .	1328.47	845.93
Brakalchat . . . . .	1328.47	785.18
Bishnath Charali . . . . .	1328.47	768.91
Bangalore . . . . .	1329.71	787.61
Bareilly . . . . .	1374.12	806.29
Bhopal . . . . .	1365.73	825.21
Bhuj . . . . .	1292.43	787.28
Bombay . . . . .	1283.19	748.34
Calcutta . . . . .	1309.12	733.41
Coch'n . . . . .	1267.61	785.05
Coimbatore . . . . .	1294.60	774.40
Cuttack . . . . .	1317.12	782.00

TABLE No 2 (6)—Contd.

	(1)	(2)	(3)
Delhi . . . . .		1345.59	800.99
Dhalli . . . . .		1452.12	881.52
Dhubri . . . . .		1328.47	783.78
Dibrugarh . . . . .		1328.47	764.68
Dimapur . . . . .		1367.07	791.45
Dharamnagar . . . . .		1328.47	780.95
Gorakhpur . . . . .		1333.79	773.33
Gambati . . . . .		1328.47	745.53
Golpara . . . . .		1328.47	794.67
Golaghat . . . . .		1328.47	778.16
Hyderabad . . . . .		1331.46	785.64
Indore . . . . .		1338.68	780.68
Imphal . . . . .		1328.47	849.49
Jaipur . . . . .		1347.25	797.90
Jamshedpur . . . . .		1320.05	778.64
Jodhpur . . . . .		1339.36	798.69
Jabalpur . . . . .		1338.80	793.72
Jaegi Road . . . . .		1328.47	762.27
Jabhla bandha . . . . .		1328.47	771.87
Jorhat . . . . .		1328.47	766.10
Kanpur . . . . .		1365.90	800.58
Kohima . . . . .		1367.07	822.16
Lucknow . . . . .		1391.24	828.60
Madras . . . . .		1277.03	764.76
Madurai . . . . .		1317.78	791.34
Mercara . . . . .		1329.27	796.93

TABLE No. 2 (5)—Contd.

	(1)	(2)	(3)
Mysore . . . . .		1342.39	8040.48
Myrdherita . . . . .		1328.47	745.53
Nagpur . . . . .		1345.16	793.11
Patfala . . . . .		1356.45	816.66
Patna . . . . .		1306.23	769.01
Poona . . . . .		1355.61	782.89
Ranchi . . . . .		1332.50	787.40
Rajkot . . . . .		1345.53	784.87
Rewa . . . . .		1370.36	813.93
Sambalpur . . . . .		1324.38	788.59
Shillong . . . . .		1328.47	786.33
Shivsagar . . . . .		1328.47	762.73
Srinagar . . . . .		1511.16	974.94
Tiruchirapalli . . . . .		1312.78	786.95
Trivandrum . . . . .		1296.96	806.44
Tezpur . . . . .		1328.47	769.82
Tinsukia . . . . .		1328.47	754.24
Visakhapatnam . . . . .		1259.60	738.47

Source: Indian Oil Corporation.

TABLE No 2(7)

## INDEX NUMBERS OF WHOLESALE PRICES OF SELECTED COMMODITIES USED IN ROAD AND ROAD TRANSPORT IN INDIA

(BASE 1961-62=100)

Years	Trans- port equip- ment	Coal	Petrol	Aviation spirit	Diesel oil	Lubi- cating oil	Electri- city
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1962-63 . .	102 1	104 9	101 9	97 1	102 1	99 5	106.0
1963-64 . .	108 9	112 2	120 2	119 8	128.9	96 8	115 1
1964-65 . .	110 8	116 3	120 6	111 9	129.3	95.8	119 6
1965-66 . .	114 7	121 8	127 0	117 4	110 9	103 4	124 9
1966-67 . .	124 8	128 5	131 5	120 9	119 3	115 9	137.2
1967-68 . .	130 0	147 9	144 5	132 0	119 3	123.3	136 5
1968-69 . .	130 6	161 2	148 6	138 1	121 7	125.3	143.3
1969-70 . .	133 5	166 0	160 0	147 8	122 8	133 1	143.9
1970-71 . .	136 6	167 9	175 5	160 9	121 1	141 9	150 2
1971-72 . .	144 3	170 9	204 5	194 9	128 9	139 7	154 0

TABLE No. 2(7)—Contd

Years	Vehicles	Cycles	Tyres and Tubes	Lime	Cement
(1)	(9)	(10)	(11)	(12)	(13)
1962-63 . . .	101.5*	105 1*	100 0*	107 0*	103 5*
1963-64 . . .	101.9	105.3	100 0		103 5
1964-65 . . .	109.3	106 1	108.8	104 5	108 3
1965-66 . . .	111.5	105 7	115 1	92 0	10 7
1966-67 . . .	116.0	102 8	127 8	90 9	122 7
1967-68 . . .	126.3	109 1	150 8	93 3	135 4
1968-69 . . .	132.6	111.9	154 4	96 5	136 9
1969-70 . . .	135 5	114 3	160 5	98.6	145 7
1970-71 . . .	138 4	118 9	160.6	104.9	151 8
1971-72 . . .	146.2	126 2	161 6	104.9	160 0

\*Relates to calendar year.

TABLE No 2 (8)

## RATIO OF STOCKS TO PRODUCTION OF SELECTED COMMODITIES

			1971*				1972*		
			1st Qr	2nd Qr	3rd Qr	4th Qr.	1st Qr	2nd Qr	3rd Qr.
(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Diesel Trucks (Nos)	Production		2155	1893	1998	1942	1896	1411	1638
	Stocks		382	997	1284	1056	335	610	753
	Ratio(%)		18	53	64	54	18	43	46
Diesel Buses (Nos)	Production		989	727	874	815	800	331	825
	Stocks		469	801	898	783	248	89	683
	Ratio(%)		47	110	103	96	31	27	83
Bicycles ('000 Nos)	Production		165	139	140	153	158	202	196
	Stocks		122	176	61	150	154	171	190
	Ratio(%)		74	127	44	98	97	85	97
Automobile tyres ('000 Nos)	Production		331	308	366	391	378	310	398
	Stocks		102	101	98	84	75	97	101
	Ratio(%)		31	33	27	21	20	29	26
Automobile Tubes ('000 Nos)	Production		322	303	356	379	377	347	393
	Stocks		107	109	97	129	98	125	125
	Ratio(%)		33	36	27	34	26	36	32
Bicycles Tyres ('000 Nos)	Production		1378	1319	1848	2223	2062	1650	1945
	Stocks		413	454	553	563	770	675	456
	Ratio(%)		30	31	30	25	37	41	23
Bicycles Tubes ('000 Nos)	Production		734	875	1282	1357	1268	1187	1341
	Stocks		789	384	393	364	513	575	855
	Ratio(%)		107	44	31	27	40	48	64



TABLE No. 2 (8)—Contd

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Iron Ore	Production	2033	1941	1762	2029	2006	1820	1891
('000 Tonnes)	Stocks	1684	1753	1468	2056	1840	1682	2006
	Ratio (%)	83	90	83	101	92	103	106
Finished Steel	Production	437	393	369	376	458	359	402
('000 Tonnes)	Stocks	165	158	111	174	163	180	195
	Ratio (%)	38	40	38	46	36	50	49
Heavy structural (Tonnes)	Production	4500	3733	3532	4509	4309	4500	4556
	Stocks	2300	3200	3700	3100	3833	2600	2412
	Ratio (%)	51	86	105	69	89	58	53
Coal	Production	6050	6070	6004	6135	6476	6488	6402
('000 Tonnes)	Stocks	9240	9160	8960	8310	7830	7610	7180
	Ratio (%)	153	151	149	135	121	117	112
Cement	Production	1291	1200	1241	1246	1327	1310	1190
('000 Tonnes)	Stocks	285	293	302	291	279	232	216
	Ratio (%)	22	24	24	23	21	18	18

\*Provisional.

Notes:—

1. Production figures are the monthly averages for the quarters.
2. Stocks figures are for the end to the quarters.
3. Ratios are stocks to production.
4. The break-up of this table under the three heads is based on broad comparison of the stock ratio in the third quarter of 1972 with the corresponding quarter of 1970 and on the overall movement in the ratio over the entire period.

Source: Economic Survey 1972-73.

TABLE No. 2(9)

# PRODUCTION OF ROLLING STOCK OF RAILWAYS IN INDIA

(In Nos.)

Name of the Undertaking	1951-52 to 1970-71	1971-72
(1)	(2)	(3)
<b>1. Chittaranjan Loco Works.</b>		
(Started production in Nov. 1950).		
Steam Locomotives . . . . .	2325	19
Electric Locomotives . . . . .	298 (24 DC) (274 AC)	46 (6 DC) 40 AC)
Diesel Locomotives . . . . .	81	40
Boilers . . . . .	2280	25
<b>2. Integral Coach Factory.</b>		
(Started production in Oct. 1955).		
Passenger coaches (un-furnished shells) including electric multiple unit stock . . . . .	8033	670
Number of shells furnished. . . . .	6053	635
<b>3. Diesel Locomotive Works.</b>		
(Started production in January, 1964).		
Diesel Locomotives . . . . .	423	105

TABLE No. 2(10)

**PRODUCTION OF MOTOR VEHICLES AND TRAILERS BY  
TYPES (ALL INDIA)**

Year		Cars & Station wagons	Jeeps & Land Rovers	Trucks		Passenger Buses		Com- mercial Vehicles (Total of Col. 4 to 7)
				Petrol	Diesel	Petrol	Diesel	
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)
1964	• •	23227	10391	7550	20729		5237	33516
1965	• •	24790	10483	6985	23171	1	7143	37300
1966	• •	27597	9807	5568	22030	66	7224	34897
1967-68	• •	34358	5359	4267	19124	9	7432	30892
1968-69	• •	35799	7790	5006	21047	..	9894	35947
1969-70	• •	35842	8523	...		•	..	35433
1970-71	• •	36819	9346	...	...	..	..	41218
1971-72	• •	40561	11227	...	•	...	...	39667

Source, Directorate General of Technical Development.

TABLE NO 2(10)—Contd

Year	Auto- mobi- les (Total of Col. 2, 3 & 8)	Motor Cycles	Scoo- ters	Mopeds & Scoo- ters	Three wheelers	Trailers
(1)	(9)	(10)	(11)	(12)	(13)	(14)
1964	67134	13858	20043	1404	2493	8620
1965 . .	72573	21364	20296	5768	1104	10544
1966 . .	72301	25042	20971	4890	1175	4637
1967-68 . .	79549	23173	33416	9405	4665	3397
1968-69	79536	31164	39609	9104	4727	3039
1969-70 .	79790	38754	52246	12032	4082	—
1970-71 .	87383	38835	58118	12200	4733	—
1971-72 . . .	91435	44064	68661	15753	7347	—

TABLE No. 2(11)

INDIGENOUS CONTENTS OF MOTOR VEHICLES AND ENGINES  
MANUFACTURED IN INDIA

Model	Percentage as on					
	1956-67	1967-68	1968-69	1969-70	1970-71	1971-72
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Cars</i>						
Herald . . .	89.80	89.80	95.00	97.10	98.61	99.30
Fiat . . .	98.25	98.25	99.06	99.25	99.25	99.64
Hindustan Ambassador	97.50	97.50	99.36	99.36	99.49	99.82
<i>Jeeps</i>						
Universal . . .	93.80	96.50	99.34	99.13	99.05	99.03
<i>Commercial Vehicles</i>						
Dodge—Short Wheel base . . .	70.30	79.92	83.51	94.21	96.33	99.36
Dodge Kew Truck . .	99.11	98.01	98.01	99.79	99.79	99.85
Dodge Kew Bus . . .	97.09	98.01	98.01	99.79	99.79	99.85
Tata Truck . . . . .	94.60	95.00	96.50	98.04	98.12	98.80
Tata Bus . . . . .	94.10	95.00	96.50	98.04	98.12	98.80
Bedford Truck . . . .	84.00	84.00	89.29	89.29	91.07	93.30
Leyland Hippo . . . .	33.00	—	45.00	46.67	47.99	50.80
Leyland Beaver . . . .	38.00	—	—	—	54.16	55.26
Leyland Titan . . . .	—	—	—	40.00	41.26	61.28
Leyland Comet . . . .	86.60	89.00	96.00	96.00	96.55	96.55
Jeep Truck . . . . .	74.50	85.90	94.50	99.25	99.09	99.15
Standard 26 Truck . .	85.96	85.96	85.96	95.41	95.41	95.20
Bajaj Tempo 3 Wheel- ers . . . . .	94.00	94.00	96.00	97.00	98.00	98.00
Bajaj Tempo Viking (1-W) . . . . .	81.00	85.00	91.00	90.00	92.00	93.00
Bajaj Tempo Metadoz (4-W) . . . . .	—	—	—	—	80.00	95.00

TABLE No. 2 (10) —Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Motor cycles</i>						
Enfield 350 CC . . .	89.80	92.20	96.50	97.30	97.50	98.20
Enfield 175 CC . . .	88.80	91.00	94.90	95.80	96.10	96.80
Rajdoot . . . . .	87.03	87.03	92.00	97.68	97.68	98.38
Jawa 250 CC . . . .	95.00	90.00	87.00	95.00	95.00	95.00
Jawa 60 CC . . . . .	75.00	72.00	73.00	90.00	90.00	90.00
<i>Scooters (2 wheelers)</i>						
Lambretta . . . . .	91.69	92.62	93.89	94.91	96.42	96.50
Bajaj . . . . .	94.80	94.92	95.91	93.97	95.97	95.97
<i>Scooters &amp; Mopeds</i>						
Surega . . . . .	64.00	64.00	72.00	81.00	81.00	84.50
Vicky . . . . .	90.00	90.00	90.00	90.00	92.00	92.00
<i>Auto-rickshaws (3 wheelers)</i>						
Lambretta . . . . .	78.20	82.30	81.43	92.04	94.47	95.50
Bajaj . . . . .	90.50	91.85	93.72	93.78	93.78	94.34
<i>Engines</i>						
Perkins P/6/354 Vehi- cular Diesel Engine.	69.19	70.37	70.87	86.90	86.98	87.78
Perkins P/6 Vehicular Diesel Engine . . . .	97.62	97.62	97.62	90.00	97.00	97.24

NOTE :—Percentage has been worked out by taking ex-factory price of the complete vehicle in the country of origin and expressing the ex-factory price of the components which are being imported as a percentage thereof.

SOURCE—Directorate General of Technical Development.

TABLE No. 2(12)

IMPORT OF MOTOR VEHICLES AND SPARE PARTS  
(ALL INDIA)

(Value in lakhs Rs.)

Year	Cars, Jeeps & Land Rovers		Motor cycles & Scooters		Buses, Vans & Trucks*	
	No.	Value	No.	Value	No.	Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)
966	368	52	279	168	300	228
967-68	482	96	10	11	545	332
968-69	235	60	14	41	175	350
969-70	106	50	3	6	68	171
970-71	456	89	26	51	207	82
971-72	321	70	82	175	841	350

\*Including road tractors for tractor-trailer combinations.

Source : Office of the Chief Controller of Exports and Imports.

TABLE No. 2(12)—Contd.

(Value in lakhs Rs.)

Year	Total motor vehicles		Spare parts excluding Tyres & Tubes	Tyres & Tubes	Grand Total
	No.	Value	Value	Value	Value
(1)	(8)	(9)	(10)	(11)	(12)
1966 . . .	947	448	1816	...	2264
1967-68 . . .	1037	429	2227	4	2660
1968-69 . . .	424	451	1789	14	2254
1969-70 . . .	177	227	1211	22	1460
1970-71 . . .	689	222	2100	59	2391
1971-72 . . .	1244	575	1735	30	2360



TABLE No. 2(13)

## IMPORTS OF CRUDE OIL AND PETROLEUM PRODUCTS DURING 1969-72

Qty. : '000 tonnes  
Value : Million Rs.

Groups	1969		1970		1971		1972(a)	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crude Oil . . . . .	10,702	940 06	11,665	1023.63	12,688	1398 79	12,289	1437.43
Petroleum Products :								
Light Distillates	50	22.07	23	9.99	72	37.35	68	20.13
Middle Distillates	575	124.43	327	76.34	877	210.50	1,303	280 18
Others	427	235.93	620	218.93	983	187.05	1,886	262 00
TOTAL (Petroleum Products)	1,052	382.43	970	305 26	1932	434 90	3,257	562 59
GRAND TOTAL . . . . .	11,754	1322.49	12,635	1328.89	14,620	1833 69	15,546	2000 02

@Provisional.

Source :—Indian Petroleum &amp; Chemicals Statistics—1972.

TABLE No. 2(14)

## EXPORTS OF PETROLEUM PRODUCTS FOR THE YEARS 1969-72

Qty. : In tonnes  
Value : In Rs. Million

Products	1969		1970		1971		1972*	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Light Distillates	639,045	87.86	553,147	46.40	140,683	21.23	5,995	8.43
Middle Distillates	67,064	9.93	45,817	5.91	6,537	1.67	81,101	67.32
Others	35,758	9.93	13,245	4.91	4,411	2.64	16,137	13.63
TOTAL (Petroleum products)	739,867	107.72	412,209	57.22	151,631	25.54	109,313	89.38
Crude Oil(ii)	—	—	—	—	—	—	862,942	136.23
Foreign exchange earned on a/c of supplies to:								
(i) Bunkers**	156,008	20.38	124,731	20.64	141,773	27.70	103,103	18.68
(ii) Airlines	81,312	34.93	118,712	51.42	133,688	50.89	161,523	92.35
TOTAL	238,120	55.31	243,443	72.06	275,463	86.59	264,626	101.03

\*Include Re-exports.

@Re-exports.

\*\*Excludes IOC sales to foreign Bunkers on KNPD Account as the value for the same is not available.

Source :—Indian Petroleum &amp; Chemicals Statistics—1972.

TABLE NO. 2 (15)

CRUDE OIL AND PETROLEUM PRODUCTS IMPORTED DURING  
1961 TO 1972

('000 tonnes)

Year	Products	Crude	Total
(1)	(2)	(3)	(4)
1961 . . . . .	2481	5968	8449
1962 . . . . .	2984	6022	9086
1963 . . . . .	2900	6519	9419
1964 . . . . .	2956	6791	9747
1965 . . . . .	2880	6811	9691
1966 . . . . .	2207	7457	9664
1967 . . . . .	951	8704	9655
1968 . . . . .	933	10450	11383
1969 . . . . .	1052	10702	11754
1970 . . . . .	970	11665	12635
1971 . . . . .	1932	12688	14620
1972@ . . . . .	3257	12289	15546

@ Provisional.

Source : Indian Petroleum and Chemicals Statistics—1972.

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**PART—II**  
**TRANSPORT SYSTEMS**

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### SECTION 3 : AIR TRANSPORT

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## AIR TRANSPORT

The Directorate General of Civil Aviation under the Ministry of Tourism and Civil Aviation is responsible for providing the necessary infrastructure for internal air transportation and for the regulation and control of all internal aviation including the gliding and flying club. The functions of D.G.C.A. include the following :

- (a) the construction, maintenance and management of terminal buildings, runways, aprons, etc., of civil aerodromes,
- (b) the provision of navigational aids and communication facilities to civil air transport,
- (c) the enforcement of air transport regulations, including safety requirements such as the certification of the air worthiness of aircraft licensing of pilots, navigators and officer aircrew and regulation of air traffic, and
- (d) enquiries into air accidents and incidents affecting the safety of aircraft.

Two Government Corporations, e.g., Air India and Indian Airlines were set up in August 1953, under the Air Corporation Act, 1953. The Air India operates its aircraft on international long distance routes and the Indian Airlines flies on all domestic routes and also routes to neighbouring countries like Afghanistan, Nepal, Burma and Ceylon.

The Corporations thus created under the Air Corporation Act are each entrusted with the functions of providing safe, efficient, adequate and economical and properly coordinated air transport services. They also exercise their powers under the Act to develop air transport services to the best advantage and provide services at reasonable rates.

The general superintendence, direction and management of the affairs and business of each Corporation vest in a Board of Directors consisting of a Chairman and between 5 and 9 members appointed by the Central Government.

Table No. 3 (1)

## FLEET OF AIR INDIA AND INDIAN AIRLINES

(As at 31st Dec.)

Type of Aircraft owned	1964	1965	1966	1967	1968	1969	1970	1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Boeing 747*	—	—	—	—	—	—	—	—
Boeing 707	7	8	9	9	10	10	10	9
Boeing 737	—	—	—	—	—	—	2	2
Caravelle	4	5	6	7	7	7	7	7
Viscount	12	12	12	12	14	14	14	12
Skymaster	3	3	3	3	3	—	—	—
F-27	10	10	13	15	15	14	13	14
Dakota	36	34	34	30	22	24	13	10
HS-740	—	—	—	2	6	12	14	12
<b>TOTAL</b>	<b>72</b>	<b>72</b>	<b>77</b>	<b>76</b>	<b>83</b>	<b>81</b>	<b>73</b>	<b>65</b>

\* Started Operation from May, 1972.

Source :—Civil Aviation Department, New Delhi.

Table No. 3 (2)

PASSENGERS TRAFFIC DOMESTIC AND INTERNATIONAL CARRIED  
BY INDIAN AIR TRANSPORT UNDERTAKINGS

Service/Year (as on 31st Dec.)	Hours flown (in thou- sands)	Kilo- meters flown (in mil- lions)	Passen- gers carried (in thou- sands)	Passen- gers Kms, flown (millions)	Avail- able seat Kms. (millions)	Passen load factor (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>(A) Domestic</b>						
1956	92.4	23.0	367.9	276.8	154.8	60.9
1961	103.6	27.8	745.0	574.5	803.7	71.5
1966	94.8	30.8	1261.4	1009.2	1401.6	72.0
1967	97.3	33.7	1508.0	1175.4	1768.3	66.5
1968	98.7	35.6	1749.4	1332.7	1894.4	70.4
1969	109.3	39.4	2051.8	1523.5	2068.4	73.7
1970	105.4	37.8	2122.8	1559.0	2029.0	76.8
1971	90.0	33.4	2055.9	1577.7	2282.2	69.1
<b>(B) International</b>						
1956	41.4	14.8	190.7	402.3	631.1	63.8
1961	34.9	16.6	229.0	698.1	1495.7	46.7
1966	29.5	19.0	287.5	1153.0	2417.6	47.7
1967	33.8	22.4	321.5	1339.3	2908.4	46.1
1968	36.7	21.4	358.8	1517.8	3238.4	46.9
1969	41.1	27.2	438.6	1711.6	3678.5	46.5
1970	42.3	27.9	548.8	1996.3	3785.5	52.7
1971	39.6	25.9	490.7	2031.4	4173.5	48.7
<b>Total</b>						
1956	136.8	37.8	558.6	679.1	1085.9	62.5
1961	138.5	44.4	973.9	1272.7	2229.4	55.4
1966	124.3	49.8	1548.9	2162.2	3919.2	56.6
1967	131.1	56.1	1829.5	2511.6	4676.7	53.8
1968	135.4	60.0	2108.2	2850.5	5132.7	55.5
1969	150.4	66.6	2490.4	3235.1	5740.9	56.5
1970	147.7	65.7	2671.6	3555.9	5815.1	61.1
1971	129.6	59.3	2546.6	3609.1	6455.7	55.9

Source:—Civil Aviation Department, New Delhi.



TABLE No. 3 (3)

## GOODS TRAFFIC OF NATIONAL AIR-TRANSPORT UNDERTAKINGS

Year (ending 31st Dec.)	Cargo carried (in thousands)			Tonne-Kms Flown (in millions)				Tonne Re- Kms. nue avail- weight able load (In factor Milli- (%) ons)	
	Freight	Mail	Total	Pass- enger	Freight	Mail	Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>Domestic</b>									
1956	40.0	4.9	44.9	24.6	19.7	4.8	49.1	70.4	69.9
1961	33.9	6.2	40.1	51.0	17.9	6.2	75.1	100.3	75.0
1966	11.9	9.0	20.9	89.5	9.3	9.0	107.8	146.6	73.5
1967	12.7	9.6	22.3	104.1	10.6	9.4	124.1	190.3	65.2
1968	13.6	9.9	23.5	118.2	11.4	9.7	139.3	193.8	71.8
1969	16.9	10.6	27.5	135.2	14.0	10.1	159.3	208.0	76.6
1970	16.6	10.4	27.0	138.3	13.7	9.8	161.8	203.3	79.6
1971	15.9	10.5	26.4	135.9	14.1	9.8	159.8	222.0	72.0
<b>International</b>									
1956	3.6	0.9	4.5	35.9	10.0	4.1	50.1	81.4	61.4
1961	6.2	1.3	7.5	62.5	26.4	6.2	95.1	213.4	44.5
1966	9.4	1.5	10.9	105.6	50.1	8.7	164.4	330.0	49.8
1967	11.0	1.6	12.6	122.6	60.1	9.8	192.4	400.6	48.0
1968	11.8	1.8	13.6	138.8	64.0	11.2	214.0	442.5	48.3
1969	15.0	1.6	16.6	156.5	82.2	10.1	248.8	494.2	50.3
1970	16.0	1.5	17.5	182.4	85.7	9.1	277.2	505.9	54.8
1971	17.6	1.2	18.8	185.4	97.1	7.8	290.3	575.4	50.4
<b>Total</b>									
1956	43.6	5.8	49.4	60.5	29.7	8.9	99.1	151.8	65.3
1961	40.1	7.5	47.6	113.5	44.2	12.5	170.2	313.7	54.3
1966	21.3	10.5	31.8	195.1	59.4	17.7	272.2	475.6	57.1
1967	23.7	11.2	34.9	226.7	70.7	19.1	316.5	590.9	53.6
1968	25.4	11.7	37.1	257.0	75.4	20.9	353.3	636.3	55.5
1969	31.9	12.2	44.1	291.7	96.3	20.1	408.1	702.2	58.1
1970	32.6	11.9	44.5	320.7	99.4	18.9	439.0	709.2	61.9
1971	33.5	11.7	45.2	321.3	111.2	17.6	450.1	797.4	56.4

Source: Civil Aviation Department, New Delhi.

TABLE No. 3 (4)

## TRAFFIC REVENUES OF NATIONAL AIR TRANSPORT UNDERTAKINGS

(In million Rs.)

Year (ending 31st Dec.)	Operating revenue earned			
	Passenger	Freight	Mail	Total
(1)	(2)	(3)	(4)	(5)
<b>Domestic</b>				
1956	35.9	15.9	8.4	60.2
1961	88.8	20.0	11.4	120.2
1966	180.3	16.9	17.1	222.3
1967	235.3	20.9	18.9	275.1
1968	293.3	25.2	20.0	338.5
1969	337.4	31.9	21.0	390.3
1970	364.0	32.7	20.6	417.3
1971	399.6	36.1	22.5	458.2
<b>International</b>				
1956	74.0	12.3	14.2	100.5
1961	141.1	32.1	20.2	193.4
1966	291.1	72.6	36.5	400.2
1967	372.1	97.9	48.2	518.2
1968	417.6	102.5	53.5	573.6
1969	460.4	130.2	46.1	636.7
1970	526.4	135.1	42.3	703.8
1971	527.3	140.6	38.4	706.3
<b>Total</b>				
1956	109.9	28.2	22.6	160.7
1961	229.9	52.1	31.6	313.6
1966	479.4	89.5	53.6	622.5
1967	607.5	118.7	67.2	793.4
1968	711.0	127.6	73.5	912.1
1969	797.8	162.1	67.1	1027.0
1970	890.4	167.6	62.9	1120.9
1971	927.1	176.7	55.9	1159.7

Source: Civil Aviation Department, New Delhi.

TABLE NO. 3 (5)  
INTERNATIONAL AIR TRAFFIC OF INDIA

(In thousands)

Year (ending 31st Dec.)	Traffic from India		Traffic to India		Total Traffic	
	Passen- ger	Ton- nage*	Passen- ger	Ton- nage*	Passen- ger	Ton- nage*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Indian Operators</b>						
1956 . . .	24.7	1.0	22.2	1.0	46.9	2.0
1961 . . .	45.3	2.0	41.7	2.2	87.0	4.2
1966 . . .	91.6	3.4	85.4	3.4	177.0	6.8
1967 . . .	106.9	4.4	99.1	3.6	205.0	8.0
1968 . . .	124.2	5.0	144.2	3.8	238.4	8.8
1969 . . .	142.0	6.2	137.5	4.3	279.5	10.5
1970 . . .	170.2	6.5	162.6	4.3	332.8	10.8
1971 . . .	163.3	6.8	150.2	4.9	322.5	11.7
<b>Foreign Operators</b>						
1956 . . .	65.5	1.6	65.9	1.2	131.4	2.8
1961 . . .	136.5	2.4	121.5	2.0	258.0	4.4
1966 . . .	189.9	3.6	164.6	3.4	354.5	7.0
1967 . . .	206.2	3.9	171.4	3.6	377.6	7.5
1968 . . .	220.6	6.1	192.7	5.3	413.3	11.4
1969 . . .	238.4	7.5	211.9	5.4	450.3	12.9
1970 . . .	283.2	8.5	262.7	5.3	545.9	13.8
1971 . . .	285.7	11.0	257.6	5.8	544.3	16.8
<b>Total Scheduled Services</b>						
1956 . . .	97.2	2.6	88.1	2.2	178.3	4.8
1961 . . .	181.8	4.4	163.2	4.2	345.0	8.6
1966 . . .	281.5	7.0	250.0	6.8	531.5	13.8
1967 . . .	313.1	8.4	270.5	7.2	583.6	15.6
1968 . . .	344.8	11.1	306.9	9.1	651.7	20.2
1969 . . .	380.4	13.7	349.4	9.7	729.8	23.4
1970 . . .	453.4	15.0	425.3	9.6	878.7	24.6
1971 . . .	450.0	18.8	416.8	10.7	866.8	29.5

\*Freight and Mail.

Source: Civil Aviation Department, New Delhi

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## **SECTION 4 : RAIL TRANSPORT AND ROPEWAYS**

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## RAIL TRANSPORT

The Ministry of Railways is responsible for planning the construction, maintenance and operation of railways and the Railway Board in the Ministry functions as the top executive for administration, technical supervision and direction of railways.

2. The Railway Board consists of the Chairman, Financial Commissioner and three other members, who are *ex-officio* Secretaries to the Government of India in the Ministry of Railways, the Chairman being the Principal Secretary. The portfolios of Civil Engineering, Mechanical Engineering, Transportation and Staff are held by the Chairman and the three Members. By virtue of the inclusion of the Financial Commissioner (Railways) who is *ex-officio* Finance Secretary to the Govt. of India in the Ministry of Railways, the Railway Board exercises all the powers of Government relating to its budget, finance and funds.

3. For the purpose of administration, Indian Railways are divided into nine zones viz., Central, Eastern, Northern, North-Eastern, North-East Frontier, Southern, South-Central, South-Eastern and Western Railways. Each Zonal Railway is headed by a General Manager who is responsible to the Railway Board for operation, maintenance and financial position of the railways in the Zone.

4. The three production units namely, the Chittaranjan Locomotive Works, Chittaranjan, the Integral Coach Factory, Madras and the Diesel Locomotive Works, Varanasi are also under the Ministry of Railways.

5. The Railway Budget was separated from the General Budget in 1924-25 subject to the obligation to contribute a fixed rate of dividend (to be periodically reviewed) to the General Exchequer which provides for the capital invested on the Railway. The Railways are however, free to pursue their own financial policies to their best advantage.

TABLE No. 4 (1)

## SUMMARY OF WORKING OF RAILWAYS

	1930-31	1935-36	1960-61	1965-66	1970-71	1971-72
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>As on 31st March:</i>						
Capital-out-charge (Millions of Rs.)	8,270	9,690	15,209	26,803	33,303	35,1
Route Kilometres	33,596	53,011	56,247	58,399	59,790	60,0
Number of Stations	5,976	6,152	6,523	6,986	7,056	7,0
<i>Rolling Stock:</i>						
(a) Locomotives:						
(i) Steam	8,120	9,026	10,312	10,613	9,307	9,22
(ii) Diesel	17	67	181	727	1,169	1,28
(iii) Electric	72	79	131	403	602	63
(b) Coaching vehicles (units)	19,081	22,610	27,177	31,477	33,310	33,58
(c) Electric multiple unit coaches	460	574	846	1,355	1,750	1,88
(d) Wagons (units)	205,596	240,756	307,907	370,019	383,990	3,82,44
No. of employees (thousands)	914	1,025	1,157	1,352	1,374	1,391

TABLE No. 4 (1) - Contd.

(1)	1950-51	1955-56	1960-61	1965-66	1970-71	1971-72
Vehicle and wagon kms. (excluding Departmental & Brake vans), Vehiclk Kilometres (mil- lions) . . . . .	2,802	3,200	3,799	4,547	5,011	5,300
(b) Wagon Kilometres (mil- lions) . . . . .	4,370	5,564	7,507	9,950	10,999	11,212
Train Kilometres (excluding Depart- mental)						
(a) Passenger & Proportion of mixed (millions) . . . . .	163.4	186.8	205.1	231.4	218.7	253.2
(b) Goods & Proportion of mixed (millions) . . . . .	111.5	133.0	161.2	192.5	202.4	206.5
Volume of Traffic (millions)						
(a) Passengers Originating . . . . .	1,284	1,275	1,594	2,002	2,431	2,536
(b) Passenger Kilometres . . . . .	66,517	62,400	77,665	96,294	118,120	125,333
(c) Tonnes Originating . . . . .	93.0	115.9	156.2	203.0	196.5	197.8
(d) Net Tonne Kilometres . . . . .	44,117	59,576	87,680	116,936	127,358	133,265

TABLE No. 1 (1)—Contd.

	1950-51	1955-56	1960-61	1965-66	1970-71	1971-72
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Operating Revenue and Expenditure (mil- lions of Rs.)</i>						
(a) Revenue—Gross Receipts . . . . .	2,633.0	3,163.3	4,601.2	7,337.6	10,069.5	10,909.7
(b) Working expenses including depreciation, etc. & Miscellaneous expenses . . . . .	2,157.1	2,659.9	3,725.5	5,909.2	8,622.2	9,278.9
(c) Net Revenue receipts . . . . .	475.6	503.4	875.7	1,318.4	1,447.3	1,630.8
(d) Percentage of net revenue receipts to the capital charges . . . . .	5.75	5.20	5.77	5.03	1.35	1.80
(e) Operating ratio . . . . .	80.0	81.6	78.1	79.5	84.2	83.2
(f) (i) Dividend to General Revenue . . . . .	725.1	361.2	558.6	1,037.8	1,645.7	1,512.1
(ii) Payment to States in lieu of tax on passenger fares . . . . .	—	—	—	125.0		
(g) Surplus (+)/ Deficit (—) . . . . .	150.5	142.2	320.1	185.6	(—) 198.1	(+) 178.1

Source :—Indian Railways.



TABLE No. 4 (2)

**ROUTE LENGTH, PASSENGER KILOMETRES, TONNE KILOMETERS  
AND EARNINGS DERIVED THEREFROM BY INDIAN RAILWAYS  
(INCLUDING NON-GOVT. RAILWAYS)**

Year ending 31st March	Route length in thou- sand kilo- metres	Passenger kilo- metres (in millions)	Earnings* from passengers carried (in mil- lion Rs.)	Tonne kilo- metres (in million)	Earnings from goods carried (in mil- lion Rs.)
(1)	(2)	(3)	(4)	(5)	(6)
1951. . . .	54.8	57,064	922	43,464	1,398
1956. . . .	55.9	62,899	1,088	59,638	1,179
1961. . . .	57.0	78,061	1,325	87,758	2,813
1966. . . .	59.1	96,756	2,203	116,048	4,531
1967. . . .	59.1	102,577	2,304	116,671	4,686
1968. . . .	59.3	107,513	2,536	118,920	4,897
1969. . . .	60.0	107,294	2,661	125,197	5,496
1970. . . .	60.1	113,738	2,799	128,304	5,788
1971. . . .	60.0	118,309	2,960	127,407	6,013
1972. . . .	60.3	125,469	3,205	133,311	6,563

\* Includes the element of passenger fares tax merged with passenger fares with effect from 1-4-1961. In lieu of this tax an amount of Rs. 12.5 crores is being paid to the General Revenues from 1961-1962 onwards.

Source : Supplement to the Reports by the Railway Board on Indian Railways.

Table No 4 (3)

ROUTE KILOMETERAGE OF GOVERNMENT RAILWAYS

(In thousand Kilometres)

Year ending 31st March							Single line	Double line	Multiple line	Total
(1)							(2)	(3)	(4)	(5)
<b>Broad Gauge</b>										
1951	.	.	.	.	.	.	20.3	4.7	0.3	22.3
1956	.	.	.	.	.	.	20.4	4.6	0.3	25.0
1961	.	.	.	.	.	.	20.3	6.1	0.3	26.7
1966	.	.	.	.	.	.	19.7	8.6	0.3	28.6
1970	.	.	.	.	.	.	19.0	10.0	0.4	29.4
1971	.	.	.	.	.	.	18.7	10.3	0.4	29.4
1972	.	.	.	.	.	.	18.9	10.7	0.4	30.0
<b>Metre Gauge</b>										
1951	.	.	.	.	.	.	24.0	0.2	.	24.2
1956	.	.	.	.	.	.	24.5	0.1	..	24.6
1961	.	.	.	.	.	.	24.9	0.3	..	25.2
1966	.	.	.	.	.	.	25.1	0.4	..	25.5
1970	.	.	.	.	.	.	25.4	0.4	...	25.8
1971	.	.	.	.	.	.	25.4	0.5	—	25.9
1972	.	.	.	.	.	.	25.1	0.5	—	25.6

TABLE No. 4(3)--Contd.

(1)	(2)	(3)	(4)	(5)
<b>Narrow Gauge</b>				
1951	4.1	...	...	4.1
1956	4.4	...	...	4.4
1961	4.4	...	...	4.4
1966	4.3	...	...	4.4
1970	4.5	...	...	4.5
1971	4.5	—	—	4.5
1972	4.5	—	—	4.5
<b>Total</b>				
1951	48.4	4.9	0.3	53.6
1956	49.8	4.9	0.3	55.0
1961	49.6	6.4	0.3	56.3
1966	49.1	9.0	0.3	58.4
1970	48.9	10.4	0.4	59.7
1971	48.6	10.8	0.4	59.8
1972	48.5	11.2	0.4	60.1

Source.—Indian Railways.

TABLE No. 4(4)

## ZONE-WISE ROUTE LENGTH AND RUNNING TRACK OF GOVERNMENT RAILWAYS (1970-72)

(In thousand kilometres)

Zone/Year ending 31st March	Route length			Running track		
	Non- Electri- fied	Electri- fied	Total	Non- Electri- fied	Electri- fied	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Central</b>						
1970	5.2	0.6	5.8	6.9	1.3	8.2
1971	5.2	0.6	5.8	7.0	1.3	8.3
1972	5.4	0.6	6.0	7.4	1.3	8.7
<b>Eastern</b>						
1970	2.9	1.2	4.1	3.9	2.5	6.4
1971	2.9	1.2	4.1	3.9	2.5	6.4
1972	3.0	1.2	4.2	4.0	2.5	6.5
<b>Northern</b>						
1970	10.2	0.4	10.6	11.7	0.7	12.4
1971	10.3	0.4	10.7	11.7	0.7	12.4
1972	10.0	0.6	10.6	11.2	1.2	12.4
<b>North-Eastern</b>						
1970	5.0	—	5.0	5.2	—	5.2
1971	5.0	—	5.0	5.2	—	5.2
1972	5.0	—	5.0	6.0	—	6.0
<b>North-East-Frontier</b>						
1970	3.6	—	3.6	3.6	—	3.6
1971	3.6	—	3.6	3.6	—	3.6
1972	3.6	—	3.6	3.6	—	3.6

TABLE No.4(4)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Southern</b>						
1970	7.3	0.1	7.4	7.9	0.2	8.1
1971	7.3	0.2	7.5	7.9	0.2	8.1
1972	7.3	0.2	7.5	7.9	0.2	8.1
<b>South-Eastern</b>						
1970	5.6	1.2	6.8	6.9	2.2	9.1
1971	5.5	1.3	6.8	6.8	2.5	9.3
1972	5.5	1.3	6.8	7.0	2.5	9.5
<b>South-Central</b>						
1970	6.2	—	6.2	6.9	—	6.9
1971	6.2	—	6.2	6.9	—	6.9
1972	6.2	—	6.2	7.0	—	7.0
<b>Western</b>						
1970	10.1	—	10.1	11.1	0.2	11.3
1971	10.1	—	10.1	11.2	0.2	11.4
1972	10.1	0.1	10.2	11.2	0.2	11.4
<b>Total</b>						
1970	56.1	3.6	59.7	64.1	7.1	71.1
1971	56.1	3.7	59.8	64.2	7.4	71.6
1972	56.1	4.0	60.1	65.3	7.9	73.2

Source: Supplement to the Report by the Railway Board on Indian Railways.

TABLE No. 4(5)

## STAFF EMPLOYED IN GOVERNMENT AND NON-GOVERNMENT RAILWAYS

(In '000)

As on 31st March	Govt. Railways*			Non-Govt.** Railways	Grand Total
	Open line	Construction	Total		
(1)	(2)	(3)	(4)	(5)	(6)
1951	910.1	3.4	913.5	9.2	922.7
1956	1020.6	4.2	1024.8	5.9	1030.7
1961	1145.2	11.8	1157.0	5.8	1162.8
1966	1327.9	24.4	1352.3	5.7	1358.0
1967	1344.7	20.1	1364.8	5.4	1370.2
1968	1345.5	17.5	1363.0	4.6	1367.6
1969	1330.3	15.6	1353.9	4.6	1358.9
1970@	1344.7	14.2	1358.9	4.6	1363.5
1971@	1360.5	13.7	1374.2	4.6	1378.8
1972	1378.9	12.4	1391.3	1.9	1393.2

\*Includes the staff employed under Railway Board also.

\*\*There is no staff employed on construction.

£Includes staff on loan from the Indian Audit and Accounts service.

@Revised.

Source : Supplement to the reports by the Railway Board on Indian Railways.

TABLE No. 4 (6)

## ROLLING STOCK OWNED BY GOVERNMENT RAILWAYS

Gauge/As on 31st March	Locomotives				Passen- ger coa- ches	Wagons (exclud- ing de- part- mental)@
	Steam	Diesel	Electric	Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Broad gauge</b>						
1951 . . . . .	5331	17	68	5416	6973	148675
1956 . . . . .	5668	47	75	5790	8149	161003
1961 . . . . .	6301	146	127	6574	10699	206929
1966 . . . . .	6619	520	381	7499	12683	257220
1971 . . . . .	5599	872	582	7053	14351	270854
1972 . . . . .	5475	966	619	7060	14853	270434
<b>Metre gauge</b>						
1951 . . . . .	2490	..	4	2494	6222	42565
1956 . . . . .	2942	20	4	2966	7240	64073
1961 . . . . .	3610	27	4	3641	8958	82938
1966 . . . . .	3600	174	22	3796	10005	90907
1971 . . . . .	3398	264	20	3682	10622	91337
1972 . . . . .	3355	284	20	3659	10676	90291
<b>Narrow gauge</b>						
1951 . . . . .	299	—	—	299	1112	4100
1956 . . . . .	416	—	—	416	1206	5323
1961 . . . . .	401	8	—	409	1355	5524
1966 . . . . .	394	33	—	427	1464	5973
1971 . . . . .	390	33	—	423	1454	5714
1972 . . . . .	392	38	—	430	1439	5672

TABLE No. 1(6)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Total</b>						
1951 . . .	8120	17	72	8209	14507	195340
1956 . . .	9026	67	79	9172	16595	230399
1961 . . .	10312	131	181	10624	21012	295391
1966 . . .	10613	727	393	11722	24152	354100
1971 . . .	9387	1969	602	11158	26427	367905
1972 . . .	9222	1288	639	11149	26998	366397

\*Includes Electric Motor Coaches. & Cars

@Includes brake vans on narrow gauge

Source : Indian Railways.



TABLE No.4(7)

## USAGE OF ENGINES, VEHICLES AND WAGONS ON GOVERNMENT RAILWAYS

(In kilometres)

Year ending 31st March	Engine Kms. per day on line (all tractions)	Vehicle kms. per vehicle day (in terms of 4 wheelers)		Wagons kilometres per wagon day (in terms of 4 wheelers)	
		Passenger	Coaching		
(1)	(2)	(3)	(4)	(5)	(6)
<b>Broad gauge</b>					
1956 . . .	135		267*		74.5
1961 . . .	137		252*		76.9
1966 . . .	142	264		218	73.2
1971 . . .	155	282		158	73.4£
1972 . . .	195	280		175	74.0
<b>Metre gauge</b>					
1956 . . .	124		198*		45.9
1961 . . .	119		177*		51.6
1966 . . .	129	183		86	60.1
1971 . . .	132	191		99	58.4
1972 . . .	132	189		96	58.5
<b>Narrow gauge</b>					
1956 . . .	100		119*		24.3
1961 . . .	97		113*		22.7
1966 . . .	94		110*		22.7
1971 . . .	87		115*£		20.2
1972 . . .	90		116*		19.5

\*Separate figures for passenger and coaching vehicles not available.  
£ Revised.

Source : Indian Railways.

TABLE No. 4(8)

**ORIGINATING TRAFFIC, NET TONNE KILOMETRES AND AVERAGE LEAD FOR PRINCIPAL COMMODITIES FOR GOVERNMENT RAILWAYS (1970-71 and 1971-72)**

Commodity	Originating Traffic (In Million tonnes)		Net Tonne Kms. (In million)		Average lead (In kms.)	
	1970-71	1971-72	1970-71	1971-72	1970-71	1971-72
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Foodgrains . . .	15.09	15.50	14505	16418	961	1059
Coal . . .	47.89	48.73	27837	29468	581	605
Fertilizers . . .	4.70	5.24	3808	4357	811	832
Mineral Oils . . .	8.86	10.06	5264	5966	559	593
Cement . . .	11.02	11.22	6990	6940	633	617
Iron and Steel . . .	32.13	31.65	14401	14068	448	444
Other Goods . . .	48.17	47.68	37891	39672	787	831
Total (Revenue earning traffic)	167.85	170.08	110696	116895	659	687
Total (Non Revenue earning traffic)	28.60	27.75	16662	16370	583	590
Grand Total . . .	196.45	197.83	127358	133265	648	674

Source: Supplement to the Report by the Railway Board on Indian Railways, 1971-72.

TABLE No. 4(9)

PURCHASE OF STORES BY INDIAN RAILWAYS  
(1970-71 and 1971-72)

Items	Imported		Indigenous		Total	
	1970-71	1971-72	1970-71	1971-72	1970-71	1971-72
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Locomotives, carriages, wagons and fittings . . . . .	215.5 (15.7)	261.8 (16.9)	1315.1 (84.3)	1282.8 (83.1)	1560.6 (100.0)	1544.6 (100.0)
Permanent way ma- terials, track tools and bridges . . . . .	0.3 (0.1)	—	234.3 (99.9)	274.3 (100.0)	234.6 (100.0)	274.3 (100.0)
Engineering stores cover- ing building materials, plant and machinery . . . . .	3.0 (2.4)	10.2 (6.0)	122.7 (97.6)	158.8 (91.0)	125.7 (100.0)	169.0 (100.0)
Electrical, signalling and telecommunication stores . . . . .	4.5 (2.0)	25.2 (7.3)	222.5 (98.0)	318.4 (92.7)	227.0 (100.0)	343.6 (100.0)
Fuel and fuel oils (in- cluding petroleum pro- ducts) . . . . .	10.1 (1.1)	20.9 (2.0)	920.2 (98.9)	1041.1 (98.0)	930.3 (100.0)	1062.0 (100.0)
Small tools, leather, can- vas, metals and other stores . . . . .	62.5 (11.2)	82.4 (11.1)	496.3 (88.8)	659.3 (88.9)	558.8 (100.0)	741.7 (100.0)
Total . . . . .	325.9 (9.0)	400.5 (9.7)	3311.1 (91.0)	3734.7 (90.3)	3637.0 (100.0)	4135. (100.0)

Note:—Figures in brackets indicate the percentage of imported and indigenous to total.

Source : Indian Railways, 1971-72.

TABLE No. 4(10)

## FINANCIAL RESULTS OF THE WORKING OF GOVERNMENT RAILWAYS

(Rs. in millions)

Years	Capital* at charge	Gross traffic Receipts	Working Ex- penses	Net Re- venue	Net Surplus	Opera- ting ratio	Net rate of re- turn on cap- ital at charge %
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
15-09-61	8270.4	2630.1	2104.8	475.6	150.5	80.0	5.8
99-9-196	9689.8	3162.9	2582.1	503.4	142.2	81.6	5.2
1960-61	15203.7	4568.0	3582.4	870.7	320.1	70.4	5.8
1965-66	26803.2	7335.7	5030.4	1340.4	185.6	79.5	5.0
1966-67	28415.7	7607.8	6392.5	1141.2	102.7	83.2	4.0
1967-68	29780.3	8181.4	6933.0	1100.0	(—)315.3	84.7	3.7
1968-69	31012.7	8988.4	7419.3	1420.1	(—)78.6	82.5	4.6
1969-70	31955.1	9512.8	7900.2	1465.6	(—)98.3	83.0	4.6
1970-71	33303.4	10066.9	8473.4	1447.3	(—)198.4	84.2	4.4
1971-72	35197.5	10965.9	9118.5	1690.8	(+)178.4	83.2	4.8

\*Include depreciation provision.

Note.—Net revenue represents the net earnings during an accounting period after meeting all the Revenue charges except the payment of dividend and of the fixed contribution of Rs.125 millions from 1961-62 in lieu of tax on passenger fares to General Revenues for transfer to the states.

Source. Reports by the Railway Board on Indian Railways.

TABLE No.4(11)

## AVERAGE FARES AND FREIGHTS ON INDIAN GOVERNMENT RAILWAYS

Year	Indices of cost						
	Average rate per Tonne Km. (Paise)	Index	Average rate per Passenger Km. (Paise)	Index	Price of Coal	Price of Iron and Steel	Per Capita cost of employees
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1950-51 . . .	3.16	100	1.48	100	100	100	100
1955-56 . . .	3.50	111	1.73	117	101	142	117
1960-61 . . .	3.87	122	1.71*	116	141	177	142
1965-66 . . .	4.57	145	2.28	154	173	219	185
1969-70 . . .	5.17	164	2.46	166	235	275	248
1970-71 . . .	5.43	172	2.50	169	238	297	269
1971-72 . . .	5.61	178	2.55	172	242	317	285

\*Does not include tax on passenger fares levied since 15th September 1957 (and subsequently abolished on certain conditions with effect from 1st April, 1961) which, on the total, comes to a little more than 10 percent of the aggregate passenger earnings.

Source : Reports by the Railway Board on Indian Railways.

TABLE NO.4(12)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)
Perder Ropeway between Jampur & Chass- nain . . . . .	Do.	9	200 (b)	2.52	28
Jharra Coalfield Ropeways:					
For Area D . . . . .	Mono 4 km. Bicable 24.75 kms.	20.75	200 450	..	9
For Area F . . . . .	A line 21.72 km. B line 20.92 km.	41.64	450 450	...	9
Raniganj Coal field Ropeways:					
J. & K.No.1 } . . . . .	...	45.07	...	..	9
J. & K.No.2 } . . . . .					
J. & K.No.3 } . . . . .					

(a) 1. Excludes cost of gathering the coal from the Collieries for loading at the receiving points of the ropeways.

2. The Life Expectancy of the collieries would be an important factor in determining the economic feasibility of a ropeway system.

(b) Ropeways brings 100 tonnes of washery rejects on return side.

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## SECTION 5 : ROADS AND BRIDGES

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## SECTION 5 : ROADS AND BRIDGES



## ROAD DEVELOPMENT IN INDIA

### (a) Jayakar Committee, 1927 :

The end of World War I saw the introduction and development of motor transport in India and with it demands began to be made for better roads, capable of withstanding the century's old bullock cart traffic and the new form of transport, as the existing roads could ill-resist the combined disintegrating action of such traffic. These demands culminated in a resolution passed by both the Chambers of the Indian Legislature in 1927 for the appointment of a Committee to examine and report on the question of road development of India. In pursuance of this resolution a Committee was appointed by the Government of India with Shri M. R. Jayakar as its Chairman.

The Jayakar Committee (1927) came to the conclusion that road development in India, as elsewhere, was passing beyond the capacity of Provincial Governments and local bodies and was becoming a national interest, which might to some extent be a proper charge on Central revenues. Its important recommendation affecting road development was that an additional duty of two annas (12 nP.) per gallon should be levied by the Centre on motor spirit for the specific purpose of road development and that the proceeds should be credited to a separate Road Development Fund. The Committee further recommended that the balance in the fund should not be allowed to lapse at the end of each year, as road programme was required to be planned and executed for a number of years and for this purpose continuance of funds should be assured.

### (b) Central Assembly Resolution (1929) for Central Road Fund :

The recommendation of the Committee was accepted by the Government of India and the Central Road Fund came into existence on the 1st March, 1929, upon the authority of a resolution adopted by the Indian Legislature, (See Annexure X). The additional duty of 2 annas (12 nP.) was raised to 2½ annas (16 nP.) per gallon in 1931. The constitution of this fund represents the first important measure taken by the Central Government to promote road development in India.

20% of the annual revenue of the Fund is retained as Central Reserve in the Fund from which grants are given by the Government of India for meeting expenditure on the administration of the Fund, road experiments and research and suitable road and bridge schemes in States e.g. inter-State roads and bridges on the borders of States. The balance of 80 percent is allocated by the Government of India to the various States on the basis of the net total petrol consumption

in the respective States. A third revision was instituted in the fund in April, 1950, called the Special Reserve to which contributions are made from outside the Central Road Fund proper for the financing of specified road projects.

The accounts of the Central Road Fund are maintained by the Accountant General, Commerce, Works and Miscellaneous. Control of expenditure is exercised by the Roads Wing, Ministry of Shipping & Transport, through quarterly reports of expenditure incurred from the Fund, which are received from the Accountant General, Commerce, Works and Miscellaneous and the Accountant General of States in form prescribed for the purpose.

**(c) Nagpur Plan for post-war Road Development, 1943 :**

The Government of India convened a conference of Provincial and State Chief Engineers at Nagpur in December, 1943 to consider the problem of post-war road development in India. The most important recommendations of this Conference (see also Annexure I) were :—

- (1) Roads should be divided into four classes, namely, National Highways, Provincial or State Highways, District Roads and Village Roads, the National Highways, which were defined as highways running through the length and breadth of India connecting major ports, foreign highways and capitals of Provinces of large States, being the frame work of the country's road system, and
- (2) The Centre should assume financial responsibility for the construction, development, and maintenance of National Highways and they should have an effective say in the use and control of these highways.

After consultation with the Provincial Governments and after discussion at meetings of the Transport Advisory Council, the Government of India accepted with effect from the 1st April, 1947, complete financial liability for the development and maintenance of certain roads provisionally approved by them as suitable for inclusion in a system of National Highways.

**(d) National Highways Act, 1956 :**

Later in 1956 National Highways Act was passed declaring the National Highways and empowering the Central Government to declare any other highway to be a National Highway or omit any highway from the list of highways declared as National Highways. This Act came into force with effect from the 15th April, 1957. (See Annexure-II).

**(e) 20 Year Plan, 1951-51 for Road Development :**

The mile targets set in the Nagpur Plan were achieved by the end of the Second Five Year Plan, but the road system remained deficient in many respects such as surface standard of some roads, weak or missing bridges etc. The political, economic and social changes that took place after the formulation of

the Nagpur plan, necessitated a fresh appraisal of the transport requirements. The Government of India entrusted this task to the Chief Engineers, who prepared a new Road Plan for the 20 years period from 1961 to 1981.

The main features of the 20 years Plan (1961-81) were to raise the total road length from about 6,02,943 kms. in 1961 to about 1,057,341 kms. in 1981 with provision for two lane carriage-ways on the National Highways. The Plan aims at doubling the intensity of roads from 16 kms. to 32 kms. per 100 sq. kms. of territory. When the Plan is completed, the average distance from a village in an agricultural area to a metalled road will be reduced from 8 kilometres, envisaged in the Nagpur Plan to 6.4 kilometres. Similarly, that from an unmetalled road will be reduced from 3.2 kms envisaged in the Nagpur Plan to 2.4 kms. The Plan also provides for 1609 kms. of Expressway with limited access and also grade separating at most of the crossings. (See Annexure III.)

The cost of this Scheme was estimated at Rs. 5,200 crores and the Chief Engineers recommended that funds for road construction and maintenance should come not only from the direct beneficiaries i.e., the motor vehicles but also from those to whom indirect benefits accrue from the development of roads.

#### *(U) Report of the Committee on Rural Roads, 1968 :*

A one man Committee under the Chairmanship of Shri H. P. Sinha was appointed by the Ministry of Shipping and Transport in 1967. A summary of its findings and recommendations is given in Annexure-IV.

#### *(g) Report of the C.T.P.C., 1966 :*

A Committee on Transport Policy and coordination was appointed by the Government of India in 1959. It submitted its Final Report in 1966. Its important conclusions and recommendations relating to roads are given in Annexure IX.

### ORGANISATION AND ADMINISTRATION OF ROADS

Unlike the Indian Government Railways whose administrative, financial and technical responsibility and control are centralised in a single authority, the Government roads in India are under the decentralised administrative control of different levels of self-Government, viz., Central Government, State Governments, Zilla Parishads, Block Samitis, Village Panchayats and Municipalities. However, though statutory authority over roads in India is decentralised from national to local level, integration of local and national plan, for development of roads is sought through the devices of delegation of executive responsibility by the higher to the lower tiers of self-Government, and sharing financial and technical responsibility by the higher with the lower levels of self-Government. Road development plans in India may indeed be an exercise in integration of local and national road development plans.

The total road length under various levels of Government of India in 1971-72 was 11.30 lakh kms. of which only 4.72 lakh kms. was surface. The controlled and management of road lengths in India in 1971-72 were distributed as follows among the various tiers of self-Government:—

		(In Lakh kms.)	
		Total	Surfaced
<i>Central Government:</i>			
(1) Roads declared as National Highways	0.28	0.26	
(2) Roads under the Military Engg. Service	0.07	0.06	
(3) Roads under the Railways	0.04	0.03	
<i>State Government:</i>			
(1) P.W.D. Departments	3.49	2.62	
(2) Forest Department	1.15	0.05	
(3) Irrigation	0.64	0.05	
(4) Electricity Deptt.	0.02	0.02	
<i>District Local Bodies</i>	4.67	1.00	
<i>Urban Areas:</i>			
Municipalities, Cantonment Board, Port Trusts and other statutory bodies in urban areas	0.94	0.63	
<b>TOTAL</b>	<b>11.30</b>	<b>4.72</b>	

Considering the road lengths in urban areas as Municipal road lengths, the road lengths of the first four authorities given above are all Extra-Municipal road lengths. The extension from time to time of the urban area limits has been partly responsible for the variations, for instance, in national highway lengths. Another contributory factor for the relative variations of road lengths under individual authorities has been the transfer of responsibility for road stretches from one authority to another, such as consequent to upgrading or downgrading of a district, State or national highway. In studying the trends in the road length of individual authorities, these limitations need to be kept in view.

The road length given above for national highway includes 1,045 kms. placed under the management of Border Roads Development Board (BRDB). The total road length in India given above is, however, exclusive of the other road lengths maintained by the B.R.D.B.

The CDNES Road lengths shown above do not provide the road lengths of village panchayats separately.

#### (a) National Highways:

National Highways generally serve to connect the national capital with the state capitals, major port towns, border areas etc. and provide the Central Government an uninterrupted transport complimentary of railways for the purpose of inter State and international transport and trade and national defence and internal security.

The National Highways Act, 1956, empowers the Government of India to declare or omit any highway as National Highway. The 44 National Highways initially included in the schedule to the Act were all extra-municipal under Section 2(1) of the Act. That is, they do not include such parts as were situated in municipal areas—a municipal area being defined as one with a population of 20,000 and more and under the control and management of a municipal committee, town committee, town area committee or any other authority. The Central Government is, however, enabled by the Act to enter into an agreement with the authority in control of the municipal area in relation to the development or maintenance of any such part of a highway situated within the municipal area on the basis of sharing of expenditure thereof.

The Act vests in the Central Government not only the national highway rights, but also the demarcated lands appurtenant thereto, all structures constructed on, or across the national highways such as bridges, culverts, tunnels, causeways, carriageways etc. and all trees, posts, fences and boundary and miles stones on the national highways on or the land appurtenant to the national highways. Under Section 7(1) of the Act, the Central Government may levy fees for services or benefits rendered in relation to the use of ferries, temporary bridges and tunnels on any national highway.

While control and management of national highways lie with the Central Government, the latter may delegate under Sections of the Act, any of its functions in relation to the development and maintenance of national highway to the Government of the State in which the national highway is situated, or to any authority subordinate to the Central or State Government and call for periodical inspection, reports as well as report on works carried out on the national highway.

The actual works on construction and maintenance of National Highways are executed by the State Public Works Departments concerned, on an agency basis. For this, the State PWDs are paid 7-1/2% as agency charges. The works relating to planning, survey, investigations, specifications and supervision etc. are done by the State PWDs under the guidance of the Roads Wing of the Ministry of Shipping and Transport, and the actual execution of work is generally given to the contractors by calling tenders.

Apart from National Highways, in the country the Government of India in the Ministry of Shipping and Transport is also responsible for the development and maintenance of other roads in the Union Territories while the execution is carried by Union Territories Public Works Departments concerned.

In order to assist the State Governments in the development of road/bridge projects of inter-state or economic importance, the Government of India provides Central Financial assistance for selected projects falling under this category. The pattern of assistance for such projects under the 4th Plan is 100 per cent loan assistance.

#### **(b) Roads Wing (Ministry of Shipping and Transport)**

The administration of roads is carried out by the Roads Wing of the Ministry of Shipping and Transport. The Roads Wing is headed by a Director General (Road Development) who is also *ex-officio* Additional Secretary to the Government of India. He is assisted by two Additional Directors General and number of Chief Engineers, Superintending Engineers, Executive Engineers and Assistant Executive Engineers. On the Secretariate side he is assisted by a Deputy Secretary and 6 under Secretaries.

Apart from the combined Secretariat and technical organisation at the Centre, the Roads Wing has a Liaison and Inspectorate Organisation, consisting of Engineer Liaison Officers attached to the Chief Engineers of various States. The Roads Wing has also some Regional Offices, which are located in the States of Bihar, Maharashtra, Rajasthan, Uttar Pradesh, Mysore and West Bengal. These Offices have been set up with a view to exercise on the spot control on the projects concerning the Central Government. The Roads Wing also administers the Central Road Fund and other funds approved by the Centre for the development and maintenance of National Highways and other State Roads. The Roads Wing also acts as a repository of technical information on roads and bridges.

(c) *Roads Administration Under Other Central Ministries .*

(i) **Roads under M.E.S. :**

Roads in the military areas are constructed and maintained by the Military Engineering Service Department. These roads are financed by the Ministry of Defence.

(ii) **Roads under Railways :**

These roads are constructed, maintained and financed by the Ministry of Railways.

(iii) **Roads in backward areas :**

For the administration of Roads in Backward Areas, 43 Special Multipurpose Tribal Blocks have been set up under the centrally sponsored programme, for intensive development of such areas. This scheme is being jointly financed by the Ministry of Home Affairs and the Ministry of Food, Agriculture, Community Development & Co-operation (Department of Community Development).

(iv) **C. D. & N. E. S. Roads :**

Besides financing the development of Special Multipurpose Tribal Block the Department of Community Development in the Ministry of Food Agriculture, Community Development and Co-operation is jointly responsible for the development of C D. & N. E. S. Roads, together with the Public Works Departments of the States and public participation by way of Shramdan, Bhoomidan, Sampatidan, etc.

(v) **Cantonment Roads :**

All Cantonment roads, which serve the civil areas, are constructed and maintained by Cantonment Boards. These Roads are financed by the Ministry of Defence.

(vi) **Border Roads :**

In order to accelerate the economic development of the North and North-Eastern Border Areas, Border Roads Development Board has been constituted with the Prime Minister as Chairman and the Defence Minister as Deputy Chairman. The other members of the Board include, among others, the Cabinet, Foreign, Defence and Home Secretaries. The Board is responsible for laying down the policy in respect of border communications, prescribing priorities and specifications and the responsibility of agencies entrusted with the execution of the projects.

The Secretary of the Board is an *ex-officio* Joint Secretary of the Ministry of Shipping and Transport. Apart from the Secretariat of the Board, a technical Organisation has also been created with the Director General of Border Roads as its head.

(d) *Roads Administration under State Governments:*

The States are left with the entire responsibility for the maintenance of :—

- (i) State Highways connecting with the National Highways or with the highways of adjacent States, district head-quarters and important cities of the States.
- (ii) District roads which serve areas of production and markets in the district connecting them with one another or with other highways and railways.
- (iii) Village roads connecting villages and groups of villages with one another and with the nearest district road, highway, railway or river ghat.
- (iv) Roads maintained by the Forest and Irrigation Departments.

State Highways are generally under the charge of the State Public Works Department with a Chief Engineer at the top. In some States e.g., Tamil Nadu and Andhra Pradesh, there is a separate Highways Department which looks after the development and maintenance of highways. The department consists of a number of circles, each responsible for a definite region. Each Circle is generally under the charge of a Superintending Engineer. Each Circle is further divided into divisions, each under the charge of a Divisional or Executive Engineer. Each division is further sub-divided into sub-divisions.

Generally, district roads (mainly other district roads) and village roads have, for many years, been the responsibility of local bodies.

The administration of rural roads, i.e., Other District Roads and Village Roads differs from State to State. In the State of Maharashtra, the Zilla Parishads have been given considerable freedom and under their direction Panchayat Samitis and Panchayats are working. In the case of Tamil Nadu the organisation of Zilla Parishads has yet to be formed. The Panchayat Samitis are working in close co-operation with Government staff. The systems followed in other States fall in between these two extremes.

The roads maintained by Forest and Irrigation Departments are entirely under the control and supervision of the respective departments.

### THE CENTRAL ROAD FUND

The Central Road Fund came into existence in 1929 on the recommendation of the Jayakar Committee. To this fund, are credited the proceeds of the additional duty on Customs and Excise on petrol. In the beginning the rate of this additional duty was 2 annas per gallon of petrol. In 1931 this was raised to 2½ annas. The prevailing rate is 16 paise per gallon.



The Fund is non-lapsing and has two sub-divisions (1) the Central Road Fund (Ordinary) Reserve and (2) the Central Road Fund (Special) Reserve. Of the proceeds credited to the Fund, 80% are allocated to state government on the basis of petrol consumed within their respective territories. The balance of 20% is credited to the Central Road Fund (Ordinary) Reserve. Contributions made by organisations like Ministry of Defence for road works under their control and supervision are credited to the Central Road Fund (Special) Reserve.

Out of the C.R.F. (Ordinary) Reserve, grants are made for expenditure on research and experimental schemes and also for specific road and bridge construction projects.

#### THE CENTRAL ROAD RESEARCH INSTITUTE, NEW DELHI

The Central Road Research Institute was set up in 1950. It is an organ of the Council of Scientific and Industrial Research and its functions include :—

1. Developing technology, by applied research, for investigation, design, construction and maintenance of different types of roads, bridges and runways.
2. Applied research on Traffic and Transportation Engineering
3. Basic scientific research necessary for applied and development research in progress under items 1 and 2 above and in consonance with national priorities.
4. Development of tools, instruments and appliances related to highways technology.
5. Rendering consultancy services to the organisations in the related fields.
6. Organising refresher courses for in-service highways engineers and extending specialised training facilities in the allied subjects.
7. Dissemination of technical information pertaining to highway engineering and allied subjects.

The head of the Institute is a Director. The Institute has nine Research Divisions (each under a Scientist) and is provided with a wide range of specialised research and testing staff and equipment needed for work relating to various branches of Highway Engineering Research such as Soil Engineering, Concrete and Bitumen Technology, Bridge Engineering, Test Tracks Construction, Operational Research on Highway Engineering Techniques and Traffic, Engineering and Transportation. Besides research, consultancy services of the Institute render technical advice to the highway engineering organisations in the country for solution of various problems.

For the benefit of highway engineers, the Institute has since 1962 been organising refresher courses periodically for both senior as well as junior highway engineers. So far, 17 refresher courses for senior and 16 courses for junior highway engineers have been organised in which 638 "in-service" highway eng

engineers from State and Central PWDs, Border Roads Organisation, E-in-Cs Branch, Union Ministry of Shipping and Transport, Municipal Corporations etc. received training. The Institute was selected by the United Nations Development Programme as a training Centre for conducting refresher course seminars for highway engineers from ECAP region countries, and as a result five such refresher courses have been held up to far in which 84 highway engineers from Afghanistan, Indonesia, Laos, Nepal, Philippines, Singapore, Thailand, South Vietnam and India, participated. The Institute, at the instance of the Indian Roads Congress and the Planning Commission, also holds every year a training course in Traffic Engineering and Urban Transportation Planning for highway engineers and town planners in India. For the benefit of in-service junior engineers, the Institute very often organises Workshops/Extension Lectures in different States.

The Institute maintains a mailing list having nearly 950 highway engineering research and allied organisations, both Indian and foreign, to whom all the research literature emanating from the Institute is sent on exchange basis.

### INDIAN ROADS CONGRESS (I. R. C.)

The Indian Roads Congress was set up in 1934 and was formally registered in 1937 under the Registration Act of 1860. The Organisation of the I. R. C. is similar to the American Association of State Highway Officials.

It was constituted to provide a forum for regular pooling of experience and ideas on all matters affecting the construction and maintenance of roads in India to recommend standard specifications relating to bridges and roads and to provide a platform for the expression of professional opinion on matters relating to roads engineering including such questions as those of organisation and administration.

The membership of the Congress consists of Ordinary Members, Associate Members and Honorary Members. The membership represents Engineers of all ranks for Central and State Governments, Military Engineering Service and commercial interests.

The affairs of the Congress are controlled by a Governing Body known as Council. It consists of 36 members nominated by Government of India, Central P.W.D., Engineer-in-Chief Branch, Central Road Research Institute and State Governments as well as selected from amongst the Ordinary and Associate Members. The Executive Committee, consisting of President, three Vice-Presidents, the Treasurer and Secretary, manages the day to day administration, examines and make recommendations to the Government on points arising out in connection with road development which cannot wait for the meeting of the Council. The Director General (Road Development), Government of India is the permanent Treasurer of the office.

The technical activities of the I.R.C. are carried out through its several Committees and Sub-Committees consisting of experts in particular subjects. A list of important publications and papers of the I.R.C. relating to roads may be seen at Appendix II.

TABLE No 3 (1)

## TRENDS OF ROAD LENGTHS—AGENCY-WISE (1955-56 TO 1971-72)

(In Km.)

Agencies	Type of surface	1955-56	1960-61	1965-66	1970-71	1971-72
(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Agencies . . .	T	178584	521478	770151	963949	1129915
	S	208796	263015	313260	420756	471982
A. Urban Roads . . .	T	39331	16361	83971	92680	93723
	S	25770	31863	55989	63830	63173
B. Extra — Municipal Roads.—						
(i) National Highways.	T	20835	23798	21036	24116	27912
	S	19200	21016	23261	23544	25912
Out of which NH under B.R.D.R. . . . .	T	.	.	902	915	1045
Out of which Missing Links . . . . .	T	..	1374	425	365	435
(ii) State Highways and other PWD Roads . . . . .	T	190612	257125	281099	335765	349261
	S	125092	171220	199410	242789	262325
(iii) Local bodies . . . . .	T	227303	197194	249821	325377	466966*
	S	38124	35886	57029	72482	100249*
(iv) Forest Deptt. . . . .	T	...	...	92239	111195	115413
	S	...	...	1516	3006	4682

\*Includes 17,275 Kms. of roads constructed over CD&NES Programme in the State of Bihar, Haryana, Kerala, Madhya Pradesh (in respect of reporting districts only), Manipur, Meghalaya, Mysore, Nagaland, Orissa and Tripura,

TABLE No. 5 (1)—Contd.

Agencies	Type of surface	1955-56	1960-61	1965-66	1970-71	1971-72
(1)	(2)	(3)	(4)	(5)	(6)	(7)
(v) State Irrigation Department	T S	... ...	... ...	33910 1590	62290 4905	63916 5238
(vi) Electricity Deptt.	T S	... ...	... ...	... ...	1686 1326	1686 1326
(vii) Railways	T S	... ...	... ...	754 484	4438 2975	4442 2978
(viii) Military Engg. Service	T S	... ...	... ...	4318 3973	6394 5899	6596 6099

Note:—In the earlier issues of this publication cumulative total length of Katcha roads constructed by the CD&NES Blocks have been included with the road lengths of other agencies to arrive at the total length of roads in different dates and in the Indian Union. It is now understood that the roads constructed by the Community Development agencies are transferred to PWD and Local Bodies in the State for maintenance. As such the figures of roads length reported in the earlier issues suffered from certain extent of double reckoning. In this issue, efforts have been made to rectify this deficiency. As such the figures of road length of the country as a whole as well as for different States reported in this issue will be less than similar figures incorporated in the earlier issues.

TABLE No. 5(2)

**TOTAL LENGTH OF GOVERNMENT ROADS IN INDIA BY AGENCY IN WHICH THEY ARE VISTED (ALL INDIA)**  
(As on 31st March 1972)

(In Kms)

Roads maintained by Govt Deptt / Agency	Surfaced	Unsurfaced	Total
(1)	(2)	(3)	(4)
Central Govt. National Highways . . . . .	25912	2000	27912
State Highways . . . . .	87117	8051	25198
Other PWD Roads . . . . .	175178	78885	254063
Urban Bodies . . . . .	63173	30550	93723
Local Bodies . . . . .	100249	366717	466966
Forest Departments . . . . .	1682	110731	115413
Irrigation Departments . . . . .	5238	58678	63916
Electricity Deptt. . . . .	1326	360	1686
Railways . . . . .	2978	1464	4442
Military Eng <sup>n</sup> Service . . . . .	6099	497	6596
All Agencies . . . . .	471982	657933	1129915

TABLE No. 5(3)  
ROAD LENGTHS BY SURFACE—AGENCY-WISE  
(As on 31st March 1972)

(In Kms.)					
Agency	Type of surface	All India	Andhra Pradesh	Assam	Bihar
(1)	(2)	(3)	(4)	(5)	(6)
Agencies	Total	1129915	72702	30276	116575
	US	657933	30332	23667	88040
	S	471932	41020	6609	28535
Urban Body	Total	93723	3456	5966	14267
	US	30550	907	3656	9832
	S	63173	2549	1710	10913
	WBM	...	1158	...	...
	BT	...	958	...	...
	CC	...	433	...	...
Extra Municipal Roads					
i) National Highways	Total	27912	2299	1652	2117
	US	2000	66	282	422
	S	25912	2233A	1370B	1695B
	WBM	...	14	38	...
	BT	...	2103	1332	...
	CC	...	116	—	...
ii) State Highways	Total	95190	5047	1053	14418
	US	8051	—	315	2752
	S	87147	5047	738	11686
	WBM	9313	230	—	—
	BT	75263	4698	738	11686
	CC	2571	119	—	—
) Other PWD Roads	Total	254063	15908	15270	2000
	US	78385	1131	13499	142
	S	175178	14777	1771	1858
	WBM	61125	4548	6	—
	BT	113483	10028	1765	1858
	CC	570	201	—	—

A As on 31-3-1971.  
B As on 31-3-1970.

TABLE No. 3 (3)—Contd.

(In Kms.)

Agency	Type of surface	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir
(1)	(2)	(7)	(8)	(9)	(10)
All agencies	Total	43395	13521	12017	3326
	US	21218	2262	9197	3262
	S	22177	13259	2850	5564
A, Urban Body	Total	5523	490	2049	497
	US	2031	49	1846	394
	S	3492	441	203	103
	WBM	..	51	...	...
	BT	...	374	...	...
	CC	...	16	...	..
B, Extra Municipal Roads	Total	1335	729	464	541@
(i) National Highways	US	—	520	—	—
	S	1335	677B	464	541
	WBM	...	—	—	—
	BT	...	553	464	511
	CC	..	124	—	—
(ii) State Highways	Total	8269	2650	2927	748
	US	832	—	1596	118
	S	7437	2650	1331	630
	WBM	501	22	—	54
	BT	6141	2628	1331	576
	CC	795	..	—	—
(iii) Other PWD Roads	Total	1904	8840	5439	5348
	US	708	—	4833	1563
	S	1196	8840	606	3785
	WBM	511	2884	—	1964
	BT	685	5956	606	1821
	CC	...	—	—	—

B As on 31-3-1970.

@ Include roads under BRDB.

TABLE No. 5(3)—Contd.

(In Kms.)

Agency	Type of surface	All India	Andhra Pradesh	Assam	Bihar
(1)	(2)	(3)	(4)	(5)	(6)
(iv) Local Body	Total	466966	39565	3067	65564
	US	366717	23300	2880	63342
		100249	14265	187	1722
	WBM	...	13680	89	...
	BT	...	583	96	...
	CC	...	2	2	...



TABLE No. 5(3)—Contd.

Agency	Type of surface	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir
(1)	(2)	(7)	(8)	(9)	(10)
(iv) Local Body	Total	24286	352	..	...
	US	16003	2	...	...
	S	8283	350	..	...
	WBM	1683	...	...	...
	BT	3597	..	...	...
	CC	3	...	...	...

TABLE No. 5(3)—Contd.

(In Kms.)

Agency	Type of Surface	Kerala	Madhya Pradesh	Maharashtra	Meghalaya
(1)	(2)	(11)	(12)	(13)	(14)
All Agencies	Total	121124	84054	97278	6668
	US	77650	47702	50775	5811
	S	43464	36352	46433	857
A. Urban Body	Total	1774	3994	7386	428
	US	1089	510	2040	200
	S	685	3484	5346	228
	WBM	290	..	1540	..
	BT	365	..	3288	..
	CC	30	..	518	..
B. Extra Municipal Roads					
(i) National Highways	Total	449	2668	2861	161
	US	—	158	459	—
	S	449	2510	2402	161
	WBM	—	..	..	—
	BT	428	..	..	161
	CC	21	..	..	—
(ii) State Highways	Total	2146	10635	14099	—
	US	—	712	585	—
	S	2146	9923	14314	—
	WBM	—	1813	3945	—
	BT	2098	8109	9472	—
	CC	48	1	897	—
(iii) Other PWD Roads	Total	12894	28267	1234	2986
	US	2113	9436	69	2611
	S	10781	18831	1165	375
	WBM	3023	10496	515	31
	BT	7722	8322	640	344
	CC	36	13	10	—

£ Includes 852 Kms. (735 Kms surfaced) of S. H. under Zilla Parishads.

TABLE No. 5(3)—Contd.

Agency	Type of Surface	Manipur	Karnataka	Nagaland	Orissa
(1)	(2)	(15)	(16)	(17)	(18)
ii) Agencies	Total	8627	99058	4821	57138
	US	7406	44155	3893	46311
	S	1221	54903	928	10827
	WBM	—	—	—	—
Urban Bodies	Total	178	14744	58	3202P
	US	113	4630	16	2043P
	S	65	10114	42	1159P
	WBM	57	5922	—	—
Extra Municipal Roads	BT	28	4015	—	—
	CC	—	177	—	—
	—	—	—	—	—
	—	—	—	—	—
i) National Highways	Total	211	1996	103	1649
	US	—	40	—	374
	S	211	1956	103	1275B
	WBM	6	128	—	—
i) State Highways	BT	205	1758	103	—
	CC	—	70	—	—
	—	—	—	—	—
	—	—	—	—	—
ii) Other PWD Roads	Total	649	6005	619	2176
	US	27	2	—	83
	S	622	6003	619	2093
	WBM	174	180	—	154
ii) Other PWD Roads	BT	448	5512	619	1939
	CC	—	311	—	—
	—	—	—	—	—
	—	—	—	—	—
ii) Other PWD Roads	Total	1780	42511	2901	13655
	US	1468	10369	2828	7459
	S	312	3214	73	6196
	WBM	164	17930	—	—
ii) Other PWD Roads	BT	148	14176	73	—
	CC	—	36	—	—
	—	—	—	—	—
	—	—	—	—	—

B. As on 31-3-1970

Table No. 5(3) — Contd.

Agency	Type of Surface	Kerala	Madhya Pradesh	Maharashtra	Andhra Pradesh
(1)	(2)	(11)	(12)	(13)	(14)
(iv) Local Body	Total	1913305	2395	57160	2501
	US	723135	1929	36208	2850
	S	28517	466	20952	1
	WBM	8062	407	18355	1
	BT	564	1	2518	1
	CG	29	58	79	1

\$ Excludes 19352 Kms. of roads length under Panchayats for which breakage is not available.

TABLE No. 5(3) — *Contd.*

Agency	Type of surface	Punjab	Rajasthan	Tamil- Nadu
(1)	(2)	(3)	(4)	(5)
<i>All Agencies</i>	Total	29721	56038	92850
	US	14673	26480	40187
	S	14830	29558	52613
<i>A. Urban Body</i>	Total	819	2860	6467
	US	156	992	1147
	S	672	1458	5320
	WBM	55	304	1213
	BT	520	752	3482
	CC	32	393	625
<i>A. Extra Municipal Roads</i>	Total	587	2089	1749
<i>(i) National Highways</i>	US	—	—	95F
	S	587	2089B	1653A
	WBM	—	—	—
	BT	537	2059	460
	CC	—	—	193
<i>(ii) State Highways</i>	Total	1020	8556	1780
	US	—	1049	—
	S	1020	7619	1780
	WBM	—	1143	1
	BT	1020	6460	1581
	CC	—	16	193
<i>(iii) Other PWD Roads</i>	Total	10439	22148	23950
	US	—	10266	281
	S	10439	11882	23659
	WBM	—	4320	3762
	BT	10439	7336	19793
	CC	—	26	114
<i>(iv) Local body</i>	Total	1382	—	53944
	US	855	—	35084
	S	527	—	18660
	WBM	—	—	—
	BT	527	—	—
	CC	—	—	—

P—Provisional

A. As on 31-3-1971.

TABLE No. 5(3)—Contd.

Agency	Type of surface	Tripura	Uttar Pradesh	West Bengal	Union Territories
(1)	(2)	(22)	(23)	(24)	(25)
<i>All Agencies</i>	Total	3862	112161	53274	11969
	US	2814	75723	33106	14471
	S	1048	36438	20168	7498
<i>A. Urban Body</i>	Total	39	10008	6303	4321
	US	—	1645	2249	1595
	S	39	8363	4054	2726
	WBM	...	...	...	...
	BT	...	...	...	...
	CC	...	...	...	...
<i>B. Extra Municipal Roads</i>					
<i>(i) National Highways</i>	Total	200	2246	14815	325
	US	—	—	50	...
	S	200	2246	1431	325
	WBM	—	...	...	...
	BT	200	...	...	...
	CC	—	...	...	...
<i>(ii) State Highways</i>	Total	136	7379b	2334	840
	US	—	—	—	—
	S	136	7379	2334	840
	WBM	—	1016	—	80
	BT	136	6258	2253	760
	CC	—	105	81	—
<i>(iii) Other PWD Roads</i>	Total	2691	19178	11316	3404
	US	2021	5210	2298	580
	S	670	13968	9018	2824
	WBM	356	5739	2345	1197
	BT	314	8112	8673	1623
	CC	—	126	..	4
<i>(iv) Local Body</i>	Total	430	21437	27259	1606
	US	430	19530	25382	1429
	S	—	1907	1877	177
	WBM	—	1421	1442	...
	BT	—	483	322	...
	CC	—	3	113	...

\* Includes 62 Kms. of NH in Sikkim.

B- As on 31-3-1970.

TABLE No. 5(3)—Contd.

Agency	Type of surface	All India	Andhra Pradesh	Assam	Bihar
(1)	(2)	(3)	(4)	(5)	(6)
(v) State Forest De- partments.	Total US S	115413 110731 4682	5033 2938 2095	2728 2728 —	13289 13289 —
(vi) State Irrigation Departments.	Total US S	63916 58678 5238	815 423 392	(130) (130) —	(4023) 4009 14
(vii) Electricity Deptt.	Total US S	1686 360 1326	104 26 78	48 12 36	62 4 58
(viii) Railways	Total US S	4442 1464 2978	219 91 128	596 125 471	643 246 397
(ix) Military Service	Engg. US S	6596 1497 6099	256 — 256	366 40 326	192 2 190

TABLE No. 5(3)—Contd.

Agency	Type of surface	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir
(1)	(2)	(7)	(8)	(9)	(10)
(v) State Forest Departments.	Total US S	1416 1393 23	146 139 7	922 922 ...	(232) 206 (26)
(vi) State Irrigation Departments.	Total US S	266 122 144	... ... ...	... ... ...	927 728 199
(vii) Electricity Deptt.	Total US S	— — —	50 20 30	... ... ...	... ... ...
(viii) Railways	Total US S	314 128 18	6 — 6	1 — 1	— — —
(ix) Military Service Engg.	Total US S	82 1 81	258 ... 258	241 ... 241	533 253 280



TABLE No. 5(3)—Contd.

Agency	Type of surface	Kerala	Madhya Pradesh	Maharashtra	Meghalaya
(1)	(2)	(11)	(12)	(13)	(14)
(v) State Forest Deptt.	Total	(1753)	32918	11273	156
	US	1399	32696	11037	154
	S	(354)	222	236	2
(vi) State Irrigation Departments	Total	285	2372	1088	...
	US	175	2112	289	...
	S	110	260	799	...
(vii) Electricity Deptt.	Total	373	30	2	84
	US	44	—	—	46
	S	329	38	2	30
(viii) Railways	Total	50	429	220	—
	US	24	149	22	—
	S	26	280	193	—
(ix) Military Engg. Service	Total	70	338	1105	52
	US	3	—	81	—
	S	67	338	1024	52

TABLE No. 5(3)—Contd.

Agency	Type of Surface	Manipur	Karnataka	Nagaland	Orissa
(1)	(2)	(15)	(16)	(17)	(18)
(v) State Forest Deptt.	Total	149	2434	294	6530
	U.S.	149	1746	281	6530
	S	—	688	13	—
(vi) State Irrigation Department.	Total	—	2942	—	—
	U.S.	—	1229	—	—
	S	—	1713	—	—
(vii) Electricity Deptt.	Total	—	—	—	—
	U.S.	—	—	—	—
	S	—	—	—	—
(viii) Railways	Total	—	85	20	204
	U.S.	—	39	—	129
	S	—	46	20	75
(ix) Military Engg. Service	Total	11	92	58	38
	U.S.	—	9	—	1
	S	11	83	58	92

TABLE No. 5(3)—Contd.

Agency	Type of surface	Possible	Water thus	Tamir Nadu
(1)	(2)	(3)	(4)	(5)
(v) State Forest Department	Total	134	3110	2350
	US	134	3110	2021
	S	—	—	329
(vi) State Irrigation Department	Total	(13347)	11242	1463
	US	(13742)	11169	1205
	S	(103)	193	205
(vii) Electricity Deptt.	Total	...	25	612
	US	...	10	153
	S	...	15	540
(viii) Railways	Total	28	171	937
	US	17	28	171
	S	11	143	165
(ix) Military Engg. Service	Total	671	225	166
	US	7	6	42
	S	664	219	124

Note: Figures in brackets relate to earlier year.

TABLE No. 5(3) — Contd.

Agency	Type of surface	Tripura	Uttar Pradesh	West Bengal	Union Territories
(1)	(2)	(3)	(4)	(5)	(6)
(v) State Forest De- partment	Total	150	25700	3400	999
	US	358	25780	2907	814
	S	—	—	502	185
(vi) State Irrigation Deptt.	Total	—	24570	...	...
	US	—	23404	...	...
	S	—	1166	...	...
(vii) Electricity Deptt.	Total	—	—	40	182
	US	—	—	8	52
	S	—	—	32	130
(viii) Railway	Total	2	513	376	...
	US	1	110	200	...
	S	1	395	376	...
(ix) Military Engg. Service	Total	6	1050	556	238
	US	4	36	12	—
	S	2	1014	544	238

TABLE No. 5 (4)

## MISSING LINKS ON NATIONAL HIGHWAYS (STATE-WISE)

(As on 31-3-1972)

State/Union Territory	National Highway No.	Length in Kms. of Missing Links
(1)	(2)	(3)
Bihar . . . . .	28 30	120
Kerala . . . . .	47A	—
Madhya Pradesh . . . . .	12	57
Mysore . . . . .	13	158
Orissa . . . . .	6	35
Rajasthan . . . . .	11	—
Tamil Nadu . . . . .	49	—
Uttar Pradesh . . . . .	11	13
West Bengal . . . . .	41	52
TOTAL		435

\* Provisional.

TABLE No 5 (5)

## NATIONAL HIGHWAYS LENGTHS BY NATURE OF SURFACE AND BY WIDTHS

(As on 31-3-1972)

(In kms)

State/Union Territory	Surfaced			Total	Unsurfaced	Grand Total	Width-wise		
	C.C.	B.T.	W.B. M.				Upto 12'	12 to 24'	Above 24'
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh (A)	116	2103	14	2233	—	2233	1451	782	—
Assam (B)	—	1174	30	1212	—	1212	38	1174	—
Bihar	—	—	—	—	—	—	—	—	—
Gujarat (B)	100	956	—	1056	—	1056	102	654	—
Haryana (B)	124	553	—	677	5	682	—	—	—
Himachal Pradesh	—	464	—	464	—	464	1	464	—
J & K *	—	94	—	94	—	94	—	47	47
Kerala	21	328	—	349**	—	349	—	349	—
Madhya Pradesh (A)	26	2418	66	2510	—	2668@	2059	451	—
Maharashtra (B)	51	2288	63	2402	1	2403	—	—	—
Manipur	—	205	6	211	—	211	211	—	—
Meghalaya	—	166	—	166	—	166	131	35	—

TABLE NO. 5 (4)

## MISSING LINKS ON NATIONAL HIGHWAYS (STATE-WISE)

(As on 31-3-1972)

State/Union Territory	National Highway No.	Length in Kms. of Missing Links
(1)	(2)	(3)
Bihar . . . . .	28 30	120*
Kerala . . . . .	47A	—
Madhya Pradesh . . . . .	12	57
Mysore . . . . .	13	158
Orissa . . . . .	6	35
Rajasthan . . . . .	11	—
Tamil Nadu . . . . .	49	—
Uttar Pradesh . . . . .	11	13
West Bengal . . . . .	41	52
TOTAL		435

\* Provisional.

TABLE No. 5 (5)

## NATIONAL HIGHWAYS LENGTHS BY NATURE OF SURFACE AND BY WIDTHS

(As on 31-3-1972)

(In kms)

State/Union Territory	Surfaced				Unsurfaced	Grand Total	Width-wise		
	C.C.	B.T.	W.B. M	Total			Upto 12'	12 to 24'	Above 24'
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh (A)	116	2103	14	2233	—	2233	1451	782	—
Assam (B)	—	1174	38	1212	—	1212	38	1174	—
Bihar	—	—	—	—	—	—	—	—	—
Gujarat (B)	100	956	—	1056	—	1056	402	654	—
Haryana (B)	124	559	—	677	51	682	—	—	—
Himachal Pradesh	—	464	—	464	—	464	—	464	—
J & K *	—	94	—	94	—	94	—	47	47
Kerala	21	328	—	349*	—	349	—	349	—
Madhya Pradesh (A)	26	2418	66	2510	—	2668@	2059	451	—
Maharashtra (B)	51	2288	63	2402	1	2403	—	—	—
Manipur	—	205	6	211	—	211	211	—	—
Meghalaya	—	166	—	166	—	166	151	35	—



TABLE No. 5 (5) —Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Mysore . .	70	1758	128	1956	12	1968	...	...	...
Nagaland . .	—	103	—	103	—	103	87	16	—
Orissa (B) . .	2	1189	84	1275	83	1338	1245	113	—
Punjab S . .	—	587	—	587	—	587	...	...	...
Rajasthan (B) . .	—	2089	—	2089	—	2089	...	...	...
Tamil Nadu(A) . .	193	1460	—	1653	—	1685	...	...	...
Tripura . .	...	...	...	...	...	...	...	...	...
Uttar Pradesh (C) . .	317	1865	33	2245	3	2248	...	...	...
West Bengal . .	95	1336	—	1431	50	1481	...	...	...
U. Territories . .	—	325	—	—	—	325	...	...	...

(A) As on 31st March, 1971.

(B) As on 31st March, 1970.

(C) As on 31st March, 1969.

\*Excludes lengths of roads under B.R.D.B.

‡Includes 32 kms of missing links.

S Does not include length of NH No. 15 which was declared after 31-3-72

@Includes 59 kms of lengths within Municipal limits and 89 kms. of missing links.

\*\* Excludes 102 kms. of length within Municipal Limits.

TABLE No. 5 (G)

GROWTH OF ROAD LENGTHS OF NATIONAL HIGHWAYS  
(TOTAL AND SURFACED)(1960-61 to 1971-72)  
(State-wise)

(In kms.)

State/Union Territory	Total Sur- faced	1960-61	1965-66	1970-71	1971-72
(1)	(2)	(3)	(4)	(5)	(6)
Andhra Pradesh	T	2272	2293	2233	2299
	S	2174	2169	2233	2233
Assam	T	1170	1400	1370*	1652
	S	1070	1400	1370	1370*
Bihar	T	1913	1913	1914	2117
	S	1337	1677	1695	1695*
Gujarat	T	1088	1040	1056	1335
	S	932	1021	1056	1335
Haryana	T	**	**	681*	729
	S			676	677
Himachal Pradesh	T	322	377	375*	464
	S	31	104	368	464
Jammu & Kashmir	T	544	520	520*	541
	S	544	520	520	541
Kerala	T	418	409	449	449
	S	402	406	449	449

TABLE No. 5 (6) Contd.

(1)	(2)	(3)	(4)	(5)	(6)
Madhya Pradesh	T	2586	2674	2667	2668
	S	2218	2585	2578	2510
Maharashtra	T	2393	2446	2403*	2861
	S	2303	2440	2402	2402
Manipur	T	££	££	209*	211
	S			209	211
Meghalaya	T	%	%	%	161
	S				161
Karnataka	T	1269	1269	1269	1996
	S	1041	1185	1185	1956
Nagaland	T	111	111	103	103
	S	111	103	103	103
Orissa	T	1371	1371	1358*	1649
	S	1172	1255	1275	1275
Punjab	T	1262	1342	514*	587
	S	1247	1342	514	587
Rajasthan	T	1258	1256	1256	2089
	S	997	1255	1256	2069
TamilNadu	T	1690	1656	1685	1741
	S	1652	1656	1653	1653
Tripura	T	—	—	—	200%
	S	—	—	—	200%
Uttar Pradesh	T	2343	2266	2246	2246
	S	2256	2461@	2246	2246

TABLE No. 5 (6)—Contd.

1	2	3	4	5	6
West Bengal%	T	1401	1403	1483	1481
	S	1256	1392	1431	1431*
Union Territories	T	284	290	325	325
	S	284	290	325	325
TOTAL	T	23798	24036	24116	27912
	S	21046	23261	23544	25912

\*As on 31-3-1970.

\*\* Included under Punjab.

£ Includes road lengths in Municipal Limits.

① @ Includes 203 kms of N.H. within Municipal Limits.

££ Included under Union Territories.

% Includes 62 kms. of N.H. in Sikkim.

B Includes 161 kms. of road in Meghalaya.

%% Provisional.

TABLE No. 5 (7)

## GROWTH OF ROAD LENGTHS IN URBAN AREAS (TOTAL AND SURFACED) ( STATE WISE)

(1960-61 to 1971-72)

(In Kms.)

State/Union Territory	Total Sur-faced	1960-61	1965-66	1970-71	1971-72
(1)	(2)	(3)	(4)	(5)	(6)
Andhra Pradesh	T	2295	2295	2295	3456
	S	1551	1551	1551	2549
Assam	T	236	4058	5366D	5366
	S	198	1313	1710	1710
Bihar	T	...	14267C	14267C	14267C
	S	...	10915	10915	10915
Gujarat	T	...	4634	5591	5523
	S	...	2731	3543	3492
Haryana	T	...	...	621D	490
	S	...	...	621	441
Himachal Pradesh	T	2049	2049	2049D	2049D
	S	203	203	203	203
Jammu & Kashmir	T	119	479E	479E	479E
	S	88	103	103	103
Kerala	T	2402	1708	1593	1774
	S	1354	668	563	685

TABLE No 5 (7)—*Contd.*

(1)	(2)	(3)	(1)	(5)	(6)
Madhya Pradesh . . .	T	—	2549	3994F	3994F
	S	—	1972	3181	3184
Maharashtra . . .	T	5694	6612	7296D	7386
	S	3887	1400	5074	5346
Meghalaya . . .	F	..	..	.	428
"	S	...	...	..	228
Manipur . . .	F	6	181	181F	178
	S	6	9	9	65
Karnataka . . .	T	8820*	12867	14428P	14744
	S	6751	8985	9898	10114
Nagaland . . .	F	—	58	58G	58G
	S	—	42	42	42
Orissa . . .	T	6127	6127H	6127H	3202**
	S	3803	3803	3803	1159**
Punjab . . .	T	1804	1827P	813D	813D
	S	1480	1498	677	677
Rajasthan . . .	T	708	708	2360D	2360D
	S	634	658	1458	1458
Tripura . . .	T	32	32	39	39F
	S	26	32	39	39F
Tamil Nadu . . .	T	4566	5181	6097D	6467D
	S	3635	4288	5151	5320

TABLE No. 5(7)—*Contd.*

(1)	(2)	(3)	(4)	(5)	(6)
Uttar Pradesh . . .	T	5125	9175	10008B	10008
	S	3762	7517	8363	8363
West Bengal . . .	T	4593J	4593J	6303D	6303D
	S	2707	2707	4054	4054
Union Territories . .	T	1777	4526	*2705F	*4321
	S	1775	2594	2569	2726
TOTAL . . .	T	46361	83974	92688	93723
	S	31863	55989	63830	63173

B—As on 31-3-1967.

C—As on 31-3-1965.

D—As on 31-3-1970.

E—As on 31-3-1964.

F—As on 31-3-1969.

G—As on 31-3-1966.

H—As on 31-3-1962.

P—As on 31-3-1963.

J—As on 31-3-1958.

\*Estimated.

\*\*—Municipal Roads only

TABLE No. 5 (8)

**NUMBER OF MAJOR BRIDGES ON NATIONAL HIGHWAYS (STATE-  
WISE) (1955-1956 to 1971-72)**  
(Year ending March)

State/Union Territories	1956	1961	1966	1967	1968	1969	1970	1971	1972
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh	3	8	11	13	13	13	13	13	15
Assam	—	1	11	11	11	12	12	12	12
Bihar	4	5	12	13	13	13	15	15	15
Gujarat	2	9	16	17	17	19	19	19	19
Haryana	—	—	—	—	—	—	—	—	—
Himachal Pradesh	—	—	—	—	—	—	—	—	—
Jammu & Kashmir	1	5	8	8	8	8	8	8	8
Kerala	—	2	2	3	3	3	3	3	5
Madhya Pradesh	2	4	5	5	6	7	7	7	8
Maharashtra	2	3	8	9	11	11	13	13	14
Mysore	—	—	—	—	—	1	1	2	3
Nagaland	—	—	—	—	—	—	—	—	—
Orissa	5	7	13	17	17	17	17	17	17
Punjab	1	3	3	3	3	6	6	6	6
Rajasthan	1	2	4	4	4	4	4	4	4
Tamil Nadu	3	7	9	9	9	9	10	10	10
Uttar Pradesh	2	4	10	11	12	12	13	13	14
West Bengal	7	13	27	29	31	31	31	31	32
Union Territories	—	1	1	1	1	1	2	2	2
<b>TOTAL</b>	<b>33</b>	<b>74</b>	<b>140</b>	<b>153</b>	<b>159</b>	<b>165</b>	<b>174</b>	<b>175</b>	<b>185</b>

Note:—The Figures relate to the number of major bridges Completed since 1947.



TABLE No. 5 (9)

## MAXIMUM LADEN WEIGHTS PERMITTED FOR VEHICLES ON NATIONAL HIGHWAYS IN STATES/UNION TERRITORIES

(As on 31st March 1972)

(In Metric Tons)

State/Union Territory	Road/Area	Maximum Laden Weights Permitted	
		Ordinary Vehicles	Articulated Vehicles
(1)	(2)	(3)	(4)
Andhra Pradesh	Andhra Region Telangana Region.	R.L.W. R.L.W.	
Assam@ . . .		10.16	
Bihar£ . . .		12.25	
Gujarat£ . . .		10.89 to 14.97	
Haryana@ . . .		15.24 20.30 (for six wheelers)	
Jammu & Kashmir@	Jammu Province In Plains In Hills Kashmir Province	12.25 8.17 3.91	
Kerala£ . . .		12.19	18.29 (Subject to limitations imposed on weak and old bridges).
Madhya Pradesh£		10.89	
Maharashtra	Bombay-Poona Road and Bombay-Agra upto Nasik	10.89 to 14.97 22.68	

TABLE 5 (9)—Contd.

(1)	(2)	(3)	(4)
Mysore . . .	N.H. No. 4 and 9 N.H. No. 7 and 13	15.24 12.19	17.88
Nagaland £ . . .		12.00	
Orissa £ . . .		8.64	
Punjab £ . . .		12.19	
Rajasthan % . . .	Udaipur Region Jaipur Region Jodhpur Region Bikaner Region	10.45 R.L.W. 6.53 6.53	
Tamil Nadu . . .		15.00— 15.24	R.L.W. (Subject to load being capacity of the structures.)
Uttar Pradesh . . .		13.21 to 15.24	
West Bengal £ . . .		14.22	
Delhi @ . . .		12.19	
Himachal Pradesh @ . . .		8.20	
Manipur @ . . .	Mao-Imphal N.H. Imphal-Mardh N.H.	8.20 5.08	
Tripura @ . . .	Agartala-Assam Road.	10.18	
Goa, Daman & Diu @		15.00	

%Data for 1965

£Data for 1971

@Data for 1969

&amp;Data for 1968

TABLE No. 5(10)

## MAXIMUM LADEN WEIGHTS PERMITTED FOR VEHICLES ON STATE HIGHWAYS

(As on 31st March, 1972)

(In Metric Tons)

State/Union Territory	Road/Area	Maximum Laden Weights Permitted	
		Ordinary Vehicles	Articulated Vehicles
(1)	(2)	(3)	(4)
Andhra Pradesh	Andhara Region Telengana Region	12-19 to 15-00 Full Registered Laden Weight	18-03 Full R.L.W.
Assam @ . . . .		10-16	
Bihar* . . . .		12-25	
Gujarat* . . . .		10-89 to 13-97	
Haryana@ . . . .		15-24	20-30 (Four wheeler vehicles)
Himachal Pradesh@ .	Single Lane Roads	8-2	
Jammu & Kashmir @	Jammu Province Roads in Plains Hill Roads Kashmir Province	12-25 8-17 3-91	
Kerala* . . . .		12-19	19-29 (Subject to limitation imposed on weak and old bridges).
Madhya Pradesh* .		10-89	
Maharashtra . . .		10-89 to 17-01	

TABLE No 5 (10)—Contd.

(1)	(2)	(3)	(4)
Manipur		1-02 to 3-05	
Mysore	One carrying Road	12-19 to 15-24	17-88
	Roads		
		18-29	
Nagaland		6-80	
Orissa*		8-64	
Punjab*		12-19	
Rajasthan%	Pali & Kotah Distt.	10-00	
	Bikaner Distt.	11-00	
	Jhunjhunu Distt.	12-00	
	Ganganagar Distt.	14-38	
Tamil Nadu		15-24	Upto RLW (Sub- ject to load bearing capacity of the struc- tures)
Tripura		12-70	
Uttar Pradesh%%	C.C.S.H.	15-24	
	Other S.H.	13-21	
West Bengal		14-22	
Goa, Daman & Diu		15-00	
Pondicherry		12-00	

%%As on 31-3-1968.

@As on 31-3-1969.

\*As on 31-3-1971.

%Information in respect of other districts is not available.

TABLE No. 5(11)

## NUMBER OF AVENUE TREES ON NATIONAL HIGHWAYS

State/Union Territory	Year ending 31st March	At the commen- cement of the year	Planted during the year	At the end of the year
(1)	(2)	(3)	(4)	(5)
Andhra Pradesh . . . . .	1967	173,410	1,677	172,33
Assam . . . . .	1958	10,661	3,528	9,979
Bihar . . . . .	1962	115,119	4,742	117,734
Gujarat . . . . .	1967	95,375	12,804	97,722
Haryana . . . . .	1972	432,819	182,353	579,110
Jammu & Kashmir . . . . .	1969	59,914	38,460	75,246
Kerala . . . . .	1967	10,330	155	10,141
Madhya Pradesh . . . . .	1965	35,948	1,949	36,621
Maharashtra . . . . .	1967	151,466	5,902	147,174
Mysore . . . . .	1972	89,791	7,980	97,362
Nagaland . . . . .		—	—	—
Orissa . . . . .	1967	46,336	1,082	46,809
Punjab . . . . .	1972	1,678,269	35,680	1,713,869
Rajasthan . . . . .	1970	59,868	—	59,556
Tamil Nadu . . . . .	1973	129,842	12,546	134,732
Uttar Pradesh . . . . .	1967	42,125	308	41,053
West Bengal . . . . .	1960	55,574	5,947	61,088
Delhi . . . . .	1967	11,136	—	10,606
Himachal Pradesh . . . . .	1972	2,729	—	2,659
Manipur . . . . .	Included in Assam			
BRDB (J & K) . . . . .	1972	21,656	13,720	28,961
Total . . . . .		3,200,712	327,553	3,442,752

TABLE No. 5(12)

EXPENDITURE ON ROADS BY STATE AND CENTRAL GOVERNMENTS  
(ALL INDIA)

(Rupees in million)

Year ending 31st March	Central			States*			Total		
	Deve- lop- ment	Main- te- nance	Total	Deve- lop- ment	Main- te- nance	Total	Deve- lop- ment	Main- te- nance	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1960	167.4	52.0	219.4	384.8	302.3	687.1	552.2	354.3	906.5
1965	443.0	73.6	516.6	579.0	483.1	1062.1	1022.0	556.7	1578.7
1966	517.0	81.9	598.9	678.5	519.2	1197.7	1195.5	601.1	1796.6
1967	434.8	76.5	511.3	624.2	525.1	1147.3	1059.0	599.6	1658.6
1968	263.5	73.6	337.1	702.3	737.9	1440.2	965.8	811.5	1777.3
1969	236.1	113.7	349.8	806.7	807.2	1613.9	1042.8	920.9	1963.7
1970	160.0	129.7	290.5	886.2	856.8	1743.0	1047.0	986.5	2033.5
1971	264.0	153.5	417.5	1160.2	998.3	2158.5	1424.2	1151.8	2576.0
1972	449.2	166.1	616.3	1324.0	1110.7	2434.7	1773.2	1276.8	3050.0

\* Including expenditure on roads in Union territories and urban road

Expenditure on Urban Roads are Estimated.

National Highways and G.R.F.

Source: (i) State Budgets and State Governments.

(ii) Ministry of Shipping and Transport, Annual Report  
1970-71.

TABLE No. 5(13)

CENTRAL AND STATE EXPENDITURE ON ROADS COMPARED TO  
CENTRAL AND STATE REVENUES FROM ROAD TRANSPORT  
(ALL INDIA)

(Rupees in million)

Year ending 31st March	Central			States including UT & Urban areas			Total		
	Re- venue	Expen- diture estima- ted	% of Ex- pen- diture to Reve- nue	Reve- nue*	Expen- diture estima- ted	% of Ex- pendi- ture to Reve- nue	Reve- nue	Expen- diture estima- ted	% of Ex- pen- di- ture to Reve- nue
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1960	795.2	219.4	27.6	551.5	687.1	124.6	1346.7	906.5	67.3
1965	2367.7	516.6	21.8	1145.3	1062.1	92.7	3513.0	1578.7	44.9
1966	2723.3	598.9	22.0	1267.3	1197.7	94.5	3990.6	1796.6	45.0
1967	2957.8	511.3	17.3	1447.5	1147.9	79.3	4405.3	1658.6	37.7
1968	3240.3	337.1	10.4	1679.8	1440.2	85.7	4920.1	1777.3	36.1
1969	3686.3	349.8	9.5	1857.4	1613.9	86.9	554.4	1963.7	35.4
1970	4033.7	290.5	7.2	2031.0	1743.0	85.8	6064.7	2033.5	33.5
1971	4518.1	417.5	9.2	2313.6	2158.5	93.3	6831.7	2576.0	37.7
1972	5448.3	615.3	11.3	2582.9	2434.7	94.3	8031.2	3050.0	38.0

\*For details see Revenue table.

SECTION-G MOTOR TRANSPORT : ADMINISTRATION



## ROAD TRANSPORT : MOTOR TRANSPORT ADMINISTRATION

Road Transport is regulated under the provisions of Motor Vehicles Act, 1939. This Central Act (Act 4 of 1939 as amended upto 1969) is an act to consolidate and amend the law relating to Motor Vehicles in India.

This Act lays down laws relating to licensing of drivers of Motor Vehicles, licensing of conductors of Stage Carriage, Registration of Motor Vehicles, Control of Transport Vehicles, Construction Equipment and maintenance of Motor Vehicles, Control of Traffic (including limits of speed, limits of weight, limitation on use, parking places for Public Service Vehicles), Insurance of Motor Vehicles against Third Party Risks and on offences, Penalties and Procedure.

This Act is administered by the State Governments who, with the concurrence of the Central Government, can introduce amendments to the various provisions in the act, keeping in view the local needs and circumstances.

### Registration of Vehicles

Generally the Regional Transport Officers in the different States are under the State Transport Commissioners. Transport Directors and Transport Controllers are in-charge of Registration of Motor Vehicles under the Motor Vehicles Act. This work is done by the Superintendent of Police of the districts in Bihar.

### Control of Commercial Transport

The operation of commercial motor transport is regulated through a system of permits. Unless covered by a permit granted or countersigned by a Regional Transport Authority (RTA) or a State Transport Authority (STA) or Inter-State Transport Commission, it is an offence to use a commercial transport vehicle on a public place. The route or area of operation, the manner in which the vehicle is to be used (State Carriage, contract carriage, private or public carrier etc.), the carrying capacity, schedules for trips etc. are indicated in the permit.

### Licensing Authorities

The R.T.A., S.T.A., or the Inter-State Transport Commission are the competent authorities for the grant of or countersigning of permits. Each State has a State Transport Authority and as many Regional Transport

Authorities as number of regions into which the State is divided for the administration of Motor Vehicle Act. According to Motor Vehicle Act the area specified on the region of R.T.A. shall in no case be less than one entire district or a whole area of a presidency town. The size of the region varies from State to State.

The functions of the S.T.A. cover co-ordination and regulations of the activities and policies of the Regional Transport Authorities; settling disputes and deciding matters on which differences of opinion may arise between R.T.As and performing duties of R.T.A. where no such Authority exists. It is also competent to revise the orders of R. T. As in certain circumstances. The State Transport Authority is bound to carry out directions issued by the State Government in matters of interest in development of motor transport co-ordination of Road-Rail Transport, preventing deterioration of roads etc.

The S.T.As and R.T.A.s are expected to ensure that transport vehicles are plying so as to serve the interest of the public and not merely that of the permit holders.

### Inter-State Transport Commission

The Inter-State Transport Commission was set up under section 63-A of the Motor Vehicles Act, 1939, in March 1959, for developing co-ordinating and regulating the operation of motor vehicles in inter-State regions or area. At present, the Commission consists of a Chairman and three other members (all part-time). The major items of work, on which the Commission is at present engaged, are as follows :—

- (i) to bring about multi-lateral and zonal agreements between the State for movement of public carriers on inter-State routes.
- (ii) to bring about uniformity in the permissible laden weight for transport vehicles on National and State Highways. The Commission has taken up with the State Governments and Union Territories where the laden weight has been placed below 33,000 lbs., due to weak bridges, culverts, roads etc., the questions of carrying out necessary improvements in the condition of roads and bridges so that the limits of laden weight could be fixed at a uniform level of 33,000 lbs. (15 tons approximately).
- (iii) to bring about uniformity in the payments of taxes in respect of temporary permits, which is considered to be one of the bottle neck to the flow of long distance traffic on inter-State route. The Commission had requested the State Government and Union Administrations to accept payment of taxes in respect of such permits either on weekly or fortnightly basis instead of quarterly basis.
- (iv) to ensure free flow of traffic on the inter-State routes, the Commission is persuading the State Governments/Union Administrations to improve the missing links and remove other bottlenecks on National and State highways.

## ROAD TRANSPORT REORGANISATION COMMITTEE, 1958

The Government of India appointed in 1958 the Road Transport Reorganisation Committee, under the Chairmanship of Shri M. R. Masani, to conduct a comprehensive enquiry regarding the existing machinery for the administration of road transport and to make recommendations for the reorganisation of the Transport Administration in the States and other cognate matters.

The main recommendations of Masani Committee related to the upgrading of weight limits for vehicles on roads, the encouragement of truck trailer combination, the grant of all-State validity to public carrier permits at the option of the applicants, liberal issue of permits for intra-state and inter-State operation, the creation of full-fledged Transport Ministries, and appointment of full-time Transport Commissioners in all States, the creation of Development Wings in the Transport Commissioners Office etc

TABLE No. 6 (1)

## GROWTH OF MOTOR VEHICLES ON THE ROAD IN INDIA 1952-1972

Year (As on 31st March)	Motor Cycles and auto- rickshaws	Passenger car and jeeps	Taxis	Buses
(1)	(2)	(3)	(4)	(5)
1962 .	116,533	314,024	25,620	59,560
1963 .	139,767	347,603	27,793	62,560
1964 ..	167,793	338,906	29,541	66,513
1965 .	211,920	395,293	31,762	70,470
1966 .	241,701	420,096	35,725	73,175
1967 .	235,892	440,629	38,321	76,033
1968 .	345,826	460,362	41,990	82,729
1969* .	419,491	526,787	51,355	87,436
70* .	601,161	537,939	59,737	91,582
1971 (P) .	612,658	622,039	60,446	93,907
1972 (P) .	693,272	672,911	66,954	99,394

† Motor Vehicles taxed tax exempted and temporarily withdrawn from use.

\* Revised.

(P) Provisional.

TABLE No. 6 (1)—Contd.

	Trucks	Others	Total
(1)	(6)	(7)	(8)
1962	189,096	44,343	749,176
1963	215,408	54,297	847,428
1964	224,181	59,030	905,964
1965	241,840	64,162	1,006,447
1966	258,977	69,369	10,99,043
1967	266,190	80,347	1,190,912
1968	284,836	95,609	1,332,352
1969*	303,524	99,738	1,488,271
1970*	322,292	113,361	1,658,122
1971(P)	342,577	193,668	1,865,315
1972(P)	363,889	143,461	2,044,881

\* Revised.

(P) Provisional.

TABLE No 6(2)

TOTAL NUMBER OF DIFFERENT MOTOR VEHICLES\* ON ROAD AS  
ON 31ST MARCH 1969 1970 1971 AND 1972-(STATEWISE)

Class of Vehicles	Andhra Pradesh	Assam	Bihar
(1)	(2)	(3)	(4)
<b>Motor Cycles</b>			
1969. . . . .	27097	3131	17170
1970. . . . .	33502	3935	19833
1971. . . . .	45182	5462	22436
1972. . . . .	(48672)	(6027)	(25059)
<b>Autorickshaws</b>			
1969. . . . .	417	61	138
1970. . . . .	155	38	169
1971. . . . .	922	78	155
1972. . . . .	(1170)	(87)	(164)
<b>Jeeps</b>			
1969. . . . .	466	4346	6527
1970. . . . .	5343	4159	7045
1971. . . . .	7254	4882	7319
1972. . . . .	(8040)	(5148)	(7715)
<b>Private Motor Cars</b>			
1969. . . . .	22914	10353	15940
1970. . . . .	25158	10386	17741
1971. . . . .	29451	11525	18249
1972. . . . .	(32700)	(12121)	(19403)
<b>Taxis</b>			
1969. . . . .	1938	668	2192
1970. . . . .	3784	741	2877
1971. . . . .	2656	828	3099
1972. . . . .	(3000)	(908)	(3417)

TABLE No 6(2)—Contd.

Class of Vehicles	Gujarat	Haryana	Jammu and Kashmir
(1)	(5)	(6)	(7)
Motor Cycles	32114	4966	(1780)
1969 . . . . .	10012	6041	(1880)
1970 . . . . .	19934	(7116)	(1980)
1971 . . . . .	61589	(8000)	(2080)
1972 . . . . .			
Motorcycles	5886	702	(45)
1969 . . . . .	6537	616	(49)
1970 . . . . .	8304	(616)	(53)
1971 . . . . .	9601	(616)	(57)
1972 . . . . .			
Jeeps	6659	698	(570)
1969 . . . . .	7427	909	(625)
1970 . . . . .	7985	(1100)	(680)
1971 . . . . .	8827	(1300)	(735)
1972 . . . . .			
Private Motor Cars	23582	1840	(2040)
1969 . . . . .	25583	2034	(2225)
1970 . . . . .	28029	(2228)	(2410)
1971 . . . . .	30286	(2422)	(2595)
1972 . . . . .			
Taxis	1456	335	(290)
1969 . . . . .	1447	131	(325)
1970 . . . . .	1669	(131)	(360)
1971 . . . . .	1864	(131)	(395)
1972 . . . . .			

TABLE No. 6(2)—Contd.

(1)	(2)	(3)	(4)
<b>Other Public Service Vehicles</b>			
1969. . . . .	6673	2353	3894
1970. . . . .	6469	2743	4196
1971. . . . .	7065	2659	4522
1972. . . . .	(7100)	(2700)	(4600)
<b>Goods Vehicles</b>			
1969. . . . .	17637	11549	14390
1970. . . . .	17659	14047	16572
1971. . . . .	19703	14679	15237
1972. . . . .	(20700)	16244	(17160)
<b>Misc. Vehicles</b>			
1969. . . . .	9115	5251	3313
1970. . . . .	11545	6650	4486
1971. . . . .	13338	7240	4782
1972. . . . .	(15500)	(8235)	(5016)
<b>TOTAL</b>			
1969. . . . .	90459	37692	63564
1970. . . . .	104115	42719	71919
1971. . . . .	125871	47353	76709
1972. . . . .	(196882)	(51470)	(80544)



TABLE No. 6(2)—Contd.

(1)	(5)	(6)	(7)
<b>Other Public Service Vehicles</b>			
1969	4880	1190	(1020)
1970	5322	990	(1060)
1971	5563	(990)	(1100)
1972	6362	(990)	(1140)
<b>Goods Vehicles</b>			
1969	26229	4981	(4488)
1970	28707	4980	(4740)
1971	32414	(4980)	(5000)
1972	35462	(4980)	(5260)
<b>Misc. Vehicles</b>			
1969	9839	2427	(190)
1970	11678	3679	(195)
1971	14069	(4900)	(200)
1972	17092	(5000)	(205)
<b>TOTAL</b>			
1969	110945	17139	(10415)
1970	126713	19380	(11099)
1971	147967	(22061)	(11783)
1972	171083	(23439)	(12467)

TABLE No. 6(2)—Contd.

Class of Vehicles	Nagaland	Orissa	Punjab	Rajasthan
(1)	(12)	(13)	(14)	(15)
<b>Motor Cycles</b>				
1969	44	6131	(13466)	14910
1970	238	7545	(14409)	(15324)
1971	584	10195	(15352)	(15798)
1972	398	11645(D)	(16295)	(16152)
<b>Auto-rickshaws</b>				
1969	—	—	(220)	(K)
1970	—	34	(235)	(K)
1971	—	112	(250)	(K)
1972	—	114(D)	(265)	(K)
<b>Jeeps</b>				
1969	651	4966	(1192)	@
1970	686	5218	(1273)	(1950)
1971	1571	4946	(1354)	(2100)
1972	933	4965(D)	(1435)	(2250)
<b>Private Motor</b>				
1969	251	3674	(7490)	20108
1970	405	4412	(8010)	(25505)
1971	323	4109	(8530)	(26902)
1972	310	5677(D)	(9050)	(30299)
<b>Taxis</b>				
1969	9	1511	(500)	1266
1970	9	1906	(572)	(1388)
1971	21	1274	(644)	(1510)
1972	11	1099(D)	(716)	(1632)

TABLE No. 6(2)—Contd.

(1)	(12)	(13)	(14)	(15)
<b>Other Public Services Vehicles</b>				
1969	—	1617	(2500)	7173
1970	90	1615	(2624)	(7497)
1971	70	1861	(2748)	(7821)
1972	140	2181(D)	(2780)	(7900)
<b>Goods Vehicles</b>				
1969	445	8348	(8020)	17316
1970	592	8948	(8033)	(16631)
1971	1424	8311	(9246)	(19946)
1972	443	8727(D)	(9859)	(21261)
<b>Misc. Vehicles</b>				
1969	—	2063	(2636)	10754
1970	—	2353	(2814)	(12077)
1971	81	2892	(2992)	(13400)
1972	13	2695(D)	(3170)	14723
<b>Total</b>				
1969	1400	28310	(36024)	71527
1970	2020	32001	(37970)	(78372)
1971	4074	33780	(41116)	(87417)
1972	2248	37103(D)	(43570)	94217

TABLE No. 6(2)—Contd.

Class of Vehicles	A. & N. Islands	Chandigarh	Delhi	Dadra & Nagar Haveli
(1)	(19)	(20)	(21)	(22)
<b>Motor Cycles</b>				
1969	229	2599	58805	111
1970	277	(3560)	75518	126
1971	371	4518	93253	221
1972	403	(5100)	114365	(220)
<b>Motor Rickshaws</b>				
1969	—	335	8214	—
1970	—	(440)	9354	—
1971	—	522	10221	—
1972	—	(600)	11323	—
<b>Jeeps</b>				
1969	90	63	2491	5
1970	105	(104)	2493	6
1971	112	139	@	23
1972	112	(170)	@	(23)
<b>Private Motor Cars</b>				
1969	59	903	44041	39
1970	59	(1280)	47033	74
1971	76	1457	56450	84
1972	75	(1600)	63158	(115)
<b>Taxis</b>				
1969	29	50	3419	—
1970	30	(52)	3555	9
1971	30	54	3842	5
1972	32	(56)	4272	(3)

TABLE No 6(2)—Contd

(1)	(19)	(20)	(21)	(22)
<b>Other Public Service Vehicles</b>				
1969 . . .	29	40	2557	—
1970 . . .	28	(108)	2745	—
1971 . . .	30	176	3048	—
1972 . . .	31	(200)	3326	—
<b>Goods Vehicles</b>				
1969 . . .	221	91	9551	80
1970 . . .	274	(73)	11038	133
1971 . . .	288	51	13620	32
1972 . . .	302	(51)	15743	(32)
<b>Miscellaneous Vehicles</b>				
1969 . . .	96	65	510	—
1970 . . .	91	(115)	548	14
1971 . . .	119	166	—	15
1972 . . .	129	(216)	—	(25)
<b>TOTAL :</b>				
1969 . . .	753	4171	129528	235
1970 . . .	865	(5733)	152282	463
1971 . . .	1026	7083	180494	381
1972 . . .	1084	(8293)	212187	(418)

TABLE No 6(2)—Contd

Class of Vehicles	Goa, Daman & Diu	Himachal Pradesh	Manipur
(1)	(23)	(24)	(25)
<b>Motor Cycles</b>			
1969 . . . . .	3057	538	311
1970 . . . . .	3281	(642)	365
1971 . . . . .	3934	(746)	377
1972 . . . . .	(5756)	(850)	397
<b>Auto-rickshaws</b>			
1969 . . . . .	49	2	—
1970 . . . . .	49	(2)	—
1971 . . . . .	31	(2)	—
1972 . . . . .	(38)	(2)	—
<b>Jeeps</b>			
1969 . . . . .	@	514	799
1970 . . . . .	@	(671)	933
1971 . . . . .	@	(628)	920
1972 . . . . .	@	(685)	933
<b>Private Motor Cars</b>			
1969 . . . . .	3384	172	199
1970 . . . . .	3584	184	202
1971 . . . . .	3842	(196)	231
1972 . . . . .	(5654)	(208)	237
1969 . . . . .	\$	150	—
1970 . . . . .	\$	(150)	—
1971 . . . . .	\$	(150)	—
1972 . . . . .	(800)	105	—

TABLE No. 6(2)—Contd.

Class of Vehicles	Goa, Daman & Diu	Himachal Pradesh	Mizoram
(1)	(23)	(24)	(25)
<b>Other Public Service Vehicles</b>			
1969	1313	580	204
1970	1366	(640)	196
1971	1391	(700)	230
1972	(872)	816	242
<b>Goods Vehicles</b>			
1969	3550	1710	697
1970	3752	(1780)	686
1971	4068	(1850)	795
1972	(5914)	1798	807
<b>Misc Vehicles</b>			
1969	—	280	198
1970	—	(320)	184
1971	—	(360)	199
1972	(15)	(400)	200
<b>TOTAL</b>			
1969	11353	3916	2400
1970	12032	(4369)	2566
1971	13319	(4632)	2752
1972	(18149)	(4864)	2816

@ Included under Motor Cars

£ Included under other public service (D) Figures as on 31-12-1971.

(S) Figures in brackets are estimated

TABLE No 6 (2)—*Contd*

Class of Vehicles	Pondicherry	Tripura	Total
(1)	(26)	(27)	(28)
<b>Motor Cycles</b>			
1969 . . . . .	1176	292	392823
1970 . . . . .	1378	553	472246
1971 . . . . .	(1580)	418	575093
1972 . . . . .	(1780)	452	656390
<b>Auto-rickshaws</b>			
1969 . . . . .	15	2	26608
1970 . . . . .	16	4	30915
1971 . . . . .	(17)	2	36765
1972 . . . . .	(18)	4	41882
<b>Jeeps</b>			
1969 . . . . .	94	967	68822
1970 . . . . .	101	1051	78077
1971 . . . . .	(108)	1133	82584
1972 . . . . .	(115)	1248	87539
<b>Private Motor Cars</b>			
1969 . . . . .	1055	214	457965
1970 . . . . .	1244	228	489912
1971 . . . . .	(1433)	259	539475
1972 . . . . .	(1622)	324	585372
<b>Taxis</b>			
1969 . . . . .	33	164	51355
1970 . . . . .	38	195	59737
1971 . . . . .	(43)	231	60446
1972 . . . . .	(48)	298	66954



TABLE No. 6(2) - *Contd*

Class of Vehicles (1)	Pondicherry (26)	Tripura (27)	Total (28)
<b>Other Public Service Vehicles</b>			
1969	97	253	87436
1970	99	255	91582
1971	(101)	269	93907
1972	(103)	260	99394
<b>Goods Vehicles</b>			
1969	231	1086	303521
1970	232	1168	322292
1971	(233)	1266	342577
1972	(234)	1790	363889
<b>Misc. Vehicles</b>			
1969	418	369	99758
1970	469	374	113361
1971	(520)	411	133668
1972	(570)	463	143461
<b>Total</b>			
1969	3119	3347	1483271
1970	3577	3628	1650122
1971	(4035)	3989	1863315
1972	(4490)	4618	2044881

\* Figures relate to vehicles taxed, tax exempted and temporarily withdrawn from use.

(K) Included in Motor Cycles.

TABLE No. 6(3)

## Number of Stage Carriages on Road by Seating Capacity

State/Union Territory	Date on	Upto 25 Seats	26-40 Seats
(1)	(2)	(3)	(4)
Andhra Pradesh	31-3-71	160	1,579
Bihar	31-6-71	76	1,034
Gujarat	31-12-71	30	161
Jammu & Kashmir	30-6-71	97	194
Kerala	30-6-70	1,482	3,494
Madhya Pradesh	31-12-68	30	1,947
Maharashtra	31-12-70	129	1,044
Karnataka	31-12-69	366	1,630
Orissa	31-12-71	79	255
TamilNadu	30-6-72	57	1,641
A. & N. Islands	31-12-72	5	40
Dadra & Nagar Haveli	30-6-71	—	—
Triपुरa	31-12-71	129	60
Total for the above 11 States and 2 Union Territories	..	2,640	13,079
Percentage to Total	..	5.50	27.27

TABLE No. 6(3)—*Contd.*

State/Union Territory	More than 40 Seats	Total
(1)	(5)	(6)
Andhra Pradesh	5,326	7,065
Bihar	3,018	4,128
Gujarat	5,817	6,008
Jammu & Kashmir	40	331
Kerala	690	5,666
Madhya Pradesh	2,414	4,391
Maharashtra	817	1,990
Karnataka	3,571	5,567
Orissa	1,84	21,817
Tamil Nadu	8,592	10,290
A. & N. Islands	40	85
Dadra & Nagar Haveli	—	—
Tripura	80	269
Total for the above 11 State and 2 Union Territories	32,252	47,971
Percentage to Total	67.23	100.00

TABLE No. 6(4)

NUMBER OF PRIVATE AND PUBLIC CARRIER GOODS VEHICLES  
ON ROAD BY CARRYING CAPACITY

State/Union Territory	Date as on	Private Carriers				Total
		Below 0.8 tonnes	0.8-3.0 tonnes	3.1-5.0 tonnes	Above 5.0 tonnes	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh	31-3-71	434	194	350	3,216	4,194
Gujarat	31-12-71	370	5,396	1,644	3,551	1,0961
Kerala	30-6-70	434	389	554	704	2,081
Madhya Pradesh	31-12-68	18	572	685	1,288	2,563
Maharashtra	31-12-70	2,159	3,365	6,494	5,334	1,7352
Mysore	31-12-69	578	477	1,251	1,847	4,153
Orissa	31-12-71	207	552	943	893	2,595
Tamil Nadu	30-6-72	454	154	1,241	3,601	3,450
A. & N. Islands	31-12-72	—	12	13	261	286
Dadra & Nagar Haveli	30-6-71	—	—	—	—	—
Tripura	31-12-71	—	55	235	301	591
Total for the above 8 States and 2 Union Territories		4,654	1,1166	1,3410	2,0996	5,0226
Percentage to Total		9.3	22.2	26.7	41.8	100.00

TARGET No. of Tons—Contd.

State/Union Territory	Date as on	Public Carriers				Total
		Below 0.8 tonnes	0.8-5.0 tonnes	5.1-5.0 tonnes	Above 5.0 tonnes	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh	31-3-71	55	877	4,361	1,0210	1,5509
Gujarat	31-12-71	646	1,660	3,152	1,0246	2,3704
Kerala	30-6-70	71	999	2,538	6,624	1,0172
Madhya Pradesh	31-12-58	30	562	5,276	5,496	1,1364
Maharashtra	31-12-70	862	5,262	1,3694	2,2591	4,0369
Mysore	31-12-69	1,900	1,605	2,953	7,858	1,1316
Odisha	31-12-71	52	463	3,255	2,382	6,152
Tamil Nadu	30-6-72	1,803	40	1,676	1,1602	1,5136
A. & N. Islands	31-12-72	—	3	—	96	99
Dadra & Nagar Haveli	30-6-71	—	—	—	19	19
Tripura	31-12-71	40	309	557	108	994
Total for the above 8 States and Union Territories.		5,444	97,29	37,442	85,199	13,7814
Percentage to Total		4.0	7.0	27.2	61.8	100.00

TABLE No. 6(4)—Contd.

State/Union Territory	Date as on	Total (Private and Public)				Total
		Below 0.8 tonnes	0.8-3.0 tonnes	3.1-5.0 tonnes	Above 5.0 tonnes	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh	31-3-71	489	1,071	4,711	13,432	19,703
Bihar	30-6-71	258	1,099	4,407	10,598	16,362
Gujarat	31-12-71	1,016	7,056	4,796	21,797	34,665
Jammu & Kashmir	30-6-71	4	779	3	—	786
Kerala	30-6-70	505	1,328	3,092	7,320	12,253
Madhya Pradesh	31-12-68	48	1,134	5,961	6,784	13,927
Maharashtra	31-12-70	3,021	6,627	20,188	27,885	57,721
Karnataka	31-12-69	2,478	2,082	4,204	9,705	18,469
Orissa	31-12-71	239	1,015	4,198	3,275	8,727
Tamil Nadu	30-6-72	2,262	203	2,917	15,204	20,586
A. & N. Islands	31-12-72	—	15	13	357	385
Dadra & Nagar Haveli	30-6-71	—	—	—	19	19
Tripura	31-12-71	40	364	772	409	1,585
Total for the above 11 States and 2 Union Territories.		10,360	22,773	55,262	1,16,793	20,5180
Percentage to Total		5.1	11.1	26.9	56.9	100.00

TABLE No. 6(5)

NO. OF DRIVING LICENCES (NEWLY ISSUED AND RENEWED) DURING  
THE YEARS ENDING 31ST MARCH 1970, 1971, AND 1972  
(Figures in '000)

State/Union Territory	*Total Professional			Authorisation to Drive public service vehicles
	(1)	(2)	(3)	(4)
Andhra Pradesh :		74.19	34.90	...
1970		83.29	35.03	...
1971		...	...	...
1972				
Assam :		0.95	0.28	0.04
1970		...	...	...
1971		...	...	...
1972				
Bihar :		34.68	18.71	2.15
1970		37.86	18.22	2.79
1971		...	...	...
1972				
Gujarat :		76.43	48.85	4.95
1970		75.09	43.47	6.07
1971		83.78	46.50	7.50
1972				
Haryana :		23.68	20.75	2.93
1970		...	...	...
1971		...	...	...
1972				
Kerala :		55.25	39.50	10.25
1970		52.74	37.46	11.56
1971		56.25	35.41	10.6
1972				

TABLE No. 6(3)—Contd.

(1)	(2)	(3)	(4)
Goa, Daman & Diu :			
1969—1970	12.39	5.90	0.26
1970—1971	13.96	4.72	0.42
1971—1972	...	...	...
Manipur :			
1969—1970	2.34	1.43	—
1970—1971	2.57	1.14	—
1971—1972	2.77	2.08	Neg.
Pondicherry :			
1969—1970	1.04	0.91	0.15
1970—1971	...	...	...
1971—1972	...	...	...
Tripura :			
1969—1970	0.76	0.68	—
1970—1971	...	...	...
1971—1972	...	...	...
Total 1960—70 (for reporting States/U.Ts) .	576.48	337.24	39.74
Total 1970—71 (for reporting States/U.Ts) .	701.92	380.40	82.8
Total 1971—72 (for reporting States/U. Ts) .	627.52	388.05	52.51

\*Total number of driving licences includes professional as well as owners Licences.

Neg. Negligable.

... Not available.

Note : Authorisation to drive public service vehicles is effected generally by an endorsement of professional licences.



TABLE No. 6/61

Distribution of operators according to fleet size as on 31st March, 1970,  
1971 and 1972

State/Union Territory	Operators owning			
	One Vehicle	2 to 5 Vehicles	6 to 10 Vehicles	11 to 20 Vehicles
(1)	(2)	(3)	(4)	(5)
Andhra Pradesh :				
1970 . . . . .	16,783	2,116	367	270
1971 . . . . .	..	..	..	..
1972 . . . . .	..	..	..	..
Assam :				
1970* . . . . .	16,336	280	122	57
1971 . . . . .	..	..	..	..
1972 . . . . .	..	..	..	..
Bihar :				
1970 . . . . .	19,447	2343	448	163
1971 . . . . .	21,567	2551	461	180
1972 . . . . .	..	..	..	..
Gujarat :				
1970 . . . . .	19,346	1,533	49	34
1971 . . . . .	22,232	1,767	66	29
1972 . . . . .	24,201	1,938	64	27
Haryana :				
1970* . . . . .	3,385	1,029	69	41
1971 . . . . .	..	..	..	..
1972 . . . . .	..	..	..	..
Kerala :				
1970* . . . . .	354	399	72	31
1971 . . . . .	..	..	..	..
1972 . . . . .	..	..	..	..

TABLE No. 6(6)—Contd.

State/Union Territory	21 to 50 Vehicles	51 to 100 Vehicles	More than 100 Vehicles	Total
(1)	(6)	(7)	(8)	(9)
Andhra Pradesh :				
1970 . . . . .	14	—	—	19,552
1971 . . . . .	..	...	...	..
1972 . . . . .	...	..	..	..
Assam :				
1970* . . . . .	3	1	...	18,819
1971 . . . . .	..	..	...	..
1972 . . . . .	..	..	...	..
Bihar :				
1970 . . . . .	32	6	5	22,444
1971 . . . . .	44	4	5	24,812
1972 . . . . .	..	..	..	..
Gujarat :				
1970 . . . . .	19	6	10	20,997
1971 . . . . .	20	10	10	24,134
1972 . . . . .	22	8	10	26,350
Haryana :				
1970* . . . . .	8	3	1	4,536
1971 . . . . .	...	...	...	...
1972 . . . . .	..	...	..	...
Kerala :				
1970* . . . . .	15	3	1	1,875
1971 . . . . .	...	...	...	...
1972 . . . . .	..	...	...	..

TABLE No 6(6)—Contd

(1)	(2)	(3)	(4)	(5)
Maharashtra .				
1970 . . . . .	55451	3138	371	152
1971 . . . . .	...	...	...	...
1972 . . . . .	...	...	...	...
Madhya Pradesh				
1970 . . . . .	13164	762	204	42
1971 . . . . .				
1972 . . . . .	16296	1165	160	51
Karnataka :				
1970 . . . . .	11318	2091	174	61
1971 . . . . .	11645	1680	157	48
1972 . . . . .	12531	1662	165	54
Orissa :				
1970 . . . . .	11845	1492	175	28
1971 . . . . .	10298	1068	73	35
1972 . . . . .	16527	1595	203	44
Rajasthan				
1970* . . . . .	13230	493	38	14
1971 . . . . .				..
1972 . . . . .				
Tamil Nadu .				
1970 . . . . .	19053	2317	267	61
1971 . . . . .	522	559	197	44
1972 . . . . .	526	627	227	41
Pradesh :				
1970 . . . . .	23676	405	39	18
1971 . . . . .				..
1972 . . . . .	...			..
& N. Islands				
1970 . . . . .	400	31	3	..
1971 . . . . .				..
1972 . . . . .				..

TABLE No. 6(6)—Contd

(1)	(6)	(7)	(8)	(9)
Maharashtra :				
1970 . . . . .	64	12	5	39193
1971 . . . . .	..	..	..	..
1972 . . . . .	..	..	..	..
Madhya Pradesh :				
1970 . . . . .	15	4	2	11103
1971 . . . . .	19	2	1	17691
1972 . . . . .	..	..	..	..
Karnataka				
1970 . . . . .	29	5	1	13679
1971 . . . . .	18	9	1	13558
1972 . . . . .	24	4	3	14453
Orissa :				
1970 . . . . .	21	6	1	13568
1971 . . . . .	..	4	5	11485
1972 . . . . .	25	8	3	18465
Rajasthan :				
1970* . . . . .	—	—	1	13776
1971 . . . . .	..	..	..	..
1972 . . . . .	..	..	..	..
TamilNadu :				
1970* . . . . .	33	9	3	21743
1971 . . . . .	17	3	2	1345
1972 . . . . .	14	3	4	1442
Uttar Pradesh :				
1970 . . . . .	2	—	—	24110
1971 . . . . .	..	..	..	..
1972 . . . . .	..	..	..	..
A. & N. Islands :				
1970 . . . . .	—	1	2	437
1971 . . . . .	..	..	..	..
1972 . . . . .	..	..	..	..

TABLE No 6(6)—Contd

(1)	(2)	(3)	(4)	(5)
Chandigarh :				
1970 . . . . .	549	8	1	—
1971 . . . . .			.	...
1972 . . . . .			.	.
Dadra & Nagar Haveli :				
1970* . . . . .	124	6	—	—
1971 . . . . .			...	..
1972 . . . . .		.	...	...
Goa, Daman & Diu				
1970 . . . . .	1893	336	24	135
1971 . . . . .		..	...	.
1972 . . . . .	.	.	...	...
Mamrupur :				
1970 . . . . .	705	60	5	—
1971 . . . . .	..	..	..	...
1972 . . . . .		..	.	...
Pondicherry :				
1970 . . . . .	285	30	—	—
1971 . . . . .	278	38	..	—
1972 . . . . .	...	..	..	...
TOTAL :				
1970 . . . . .	198601	14435	1806	763
1971 . . . . .	52777	5775	784	271
1972 . . . . .	91788	9538	1280	407

As on 31-3-1969.

£ For buses only.

TABLE No. 6(6)—*contd.*

(1)					(6)	(7)	(8)	(9)
Chandigarh :								
1970 .	:	:	:	:	—	1	—	559
1971 .	:	:	:	:	...	...	..	:
1972 .	:	:	:	:	...	...	..	:
Dadra & Nagar Haveli :								
1970 .	:	:	:	:	—	—	—	130
1971 .	:	:	:	:	...	...	..	:
1972 .	:	:	:	:	...	...	..	:
Goa, Daman & Diu :								
1970 .	:	:	:	:	15	7	—	2288
1971 .	:	:	:	:	...	...	..	..
1972 .	:	:	:	:	...	...	..	..
Manipur :								
1970 .	:	:	:	:	—	—	1	771
1971 .	:	:	:	:	...	...	..	:
1972 .	:	:	:	:	...	...	..	:
Pondicherry :								
1970 .	:	:	:	:	—	—	—	315
1971 .	:	:	:	:	—	—	—	516
1972 .	:	:	:	:	..	..	..	:
TOTAL :								
1970 .	:	:	:	:	207	53	27	215992
1971 .	:	:	:	:	69	24	22	59722
1972 .	:	:	:	:	148	29	26	103216

@For the private operators only.

\*\*Included under Column 5.

TABLE No. 6(7)

**NUMBER OF MOTOR VEHICLES PLYING ON INTER STATE ROUTES  
WITH REGULAR/TEMPORARY PERMITS ISSUED  
BY EACH STATE**

(As on 1st April, 1970, 1971 and 1972)

State/Union Territory		Regular Permits			Temporary Permits		
		Goods Vehicles			Goods Vehicles		
		Stage Carriages	Public Carriers	Private Carriers	Stage Carriages	Public Carriers	Private Carriers
(1)		(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh	1970	—	4,724	178	—	49	—
	1971	—	4,704	147	—	46	—
	1972	...	...	...	...	...	...
Bihar	1970	168	305	199	—	2,292	32
	1971	114	443	162	—	1,897	22
	1972	...	...	...	...	...	...
Gujarat	1970	...	951	44	4	914	4
	1971	...	1,426	43	7	258	1
	1972	...	1,686	52	4	430	51
Himachal Pradesh	1970	2	40	22	128	680	50
	1971	...	...	...	...	...	...
	1972	...	...	...	...	...	...
Kerala	1970	152	1,544	68	26	176	—
	1971	...	...	...	...	...	...
	1972	...	...	...	...	...	...
Maharashtra	1970	163	5,412	245	80	975	20
	1971	...	...	...	...	...	...
	1972	309	7,892	173	51	1,170	10

TABLE No. 6(7)—Contd.

1	(2)	(3)	(4)	(5)	(6)	(7)
Karnataka	1970	228	1,951	162	—	—
	1971	228	5,311	195	—	—
	1972*	134	184	270	227	1,533
Nagaland	1970	4	505	—	—	15
	1971	4	505	—	—	15
	1972	..	..	..	..	..
Orissa	1970	6	20	16	98	1,722
	1971	112	1,006	1	169	3,256
	1972	67	750	10	8	1,492
Tamil Nadu	1970	326	4,015	161	—	..
	1971	360	1,186	183	—	..
	1972	...	...	...	...	..
A. & N. Islands	1970	.	...	...	...	—
	1971	..	..	..	...	—
	1972	.	...	..	...	...
Chandigarh	1970	...	...	..	..	...
	1971	—	19	2	15	2
	1972	..	..	...	...	...
Delhi	1970	285	7,057	205	7	969
	1971	..	...	...	...	...
	1972	.	...	...	..	...
Haryana	1970	..	...	...	.	...
	1971	...	..	.	..	...
	1972*	134	939	669	12	58
Dadra & Nagar Haveli	1970	—	—	—	—	—
	1971	...	..	..	...	...
	1972	.	.	..	...	...



TABLE No. 6(7)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Goa, Daman & Diu	1970	40	359	20	—	4,018	475
	1971	41	492	21	24	4,133	486
	1972	...	...	...	...	...	...
Pondicherry	1970	63	213	111	—	—	—
	1971	66	191	104	—	—	—
	1972	...	...	...	...	...	...
<hr/>							
Total (for reporting States/ Union Territories)—1970		1,457	30,095	1,432	345	11,226	2,422
Total (for reporting States/ Union Territories)—1971		925	18,283	861	215	9,607	615
Total (for reporting States/ Union Territories)—1972		935	11,361	1,179	302	4,603	82

\*As on 30-6-1972

@As on 30-9-1972.

TABLE No. 6(8)\*

TYPE OF COMMODITIES MOVED ON ARTERIAL ROADS IN THE  
COUNTRY AND THEIR AVERAGE LEAD

(1963)

Commodity	Quantity in tonnes	Tonne kms. performed	Average lead in. kms.
(1)	(2)	(3)	(4)
Fruits and vegetables	75,653	22,713,366	300
Building materials	67,797	10,181,755	150
Foodgrains	63,434	14,461,171	228
Provisions	33,944	15,867,901	467
Iron and steel	33,328	13,739,406	412
Mineral oils	32,942	8,388,883	255
Coal	25,854	6,082,291	255
Wood	25,247	5,699,247	226
Textiles	25,733	16,279,583	633
Sugar	19,960	5,362,276	269
Machinery	14,764	11,126,931	754
Medicine and chemicals	12,707	6,361,504	501
Vegetable oils	7,657	3,354,492	438
Fodder	1,347	1,457,060	198
Cotton	6,691	3,910,257	584
Oilseeds	6,547	1,837,554	281
Cement	6,063	1,568,860	260
Others	177,989	85,330,752	479
<b>Total</b>	<b>643,637</b>	<b>233,723,309</b>	<b>363</b>

\*Result of roads traffic survey 1963 on 16 long distance trunk routes.

TABLE No. 6(9)\*

**DISTRIBUTION OF TRIPS MADE BY GOODS VEHICLES ON  
ARTERIAL ROADS ACCORDING TO LENGTH OF HAULAGE  
(1963)**

Length of haulage kilometres	Percentage
(1)	(2)
Upto 50 . . . . .	6.4
More than 50 upto 100 . . . . .	11.4
More than 100 upto 200 . . . . .	25.6
More than 200 upto 300 . . . . .	17.9
More than 300 upto 500 . . . . .	19.9
More than 500 upto 700 . . . . .	8.8
More than 700 upto 1,000 . . . . .	3.4
More than 1,000 upto 1,500 . . . . .	8.9
1,500 and above . . . . .	2.7
<b>Total</b>	<b>100.0</b>

\*Results of goods traffic survey, 1963 on 16 long distance trunk routes.

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**SECTION 7 : TAXATION ON MOTOR TRANSPORT**

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## TAXATION ON MOTOR TRANSPORT

Motor Transport in India is subject to taxation by the local bodies State Government as well as Central Government. Taxes are levied on the vehicles, passengers and goods carried. They are also levied on the fuel, tyres and tubes and other accessories. The multiplicity of taxing authorities and the multiple-points of taxation were considered to impede the free flow of traffic and development of motor transport in the country. A number of Committees were appointed by the Government to investigate the matter and made recommendations. Summaries of the recommendations of the Study Group on Motor Vehicles taxation and of the Road Transport Taxation Enquiry Committee may be seen in this connection at Annexures V and VI.

TABLE No. 7(1)  
REVENUE FROM ROAD TRANSPORT IN INDIA

(In lakh Rupees)

Year ending 31st March	Central**						
	Motor Vehicles and Accessories		Tyres and Tubes		Motor Fuel†		Total
	Import duty	Excise duty	Import duty	Excise duty	Import duty	Excise duty	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1965 . .	2,603	1,938	19	2,573	2,892	13,662	23,675
1966 . .	2,692	2,077	18	2,885	2,943	16,616	27,231
1967 . .	2,240	2,270	26	3,620	1,835	19,579	29,570
1968 . .	2,106	2,180	63	3,789	320	23,945	32,403
1969 . .	1,880	2,416	57	4,898	264	27,348	36,863
1970 . .	1,331	2,433	133	5,106	344	30,910	40,331
1971 . .	1,426	2,798	103	5,490	436	34,920	45,101
1972(P) . .	2,230	3,482	180	6,240	960	41,391	54,483

\*These figures are based on details published in State/Central Budgets since there is no regular reporting system in matters of supply of such data. Hence these figures are to be taken as estimates.

\*\*Revised figures.

†Estimate for Road Transport.

TABLE No. 7(1)—Contd.

(In lakh Rupes)

Year ending 31st March	States*				Grand Total
	Motor Vehicles Taxes & Fees	Sales Tax on Motor Fuel	Passen- ger & Goods Tax	Total	
(1)	(9)	(10)	(11)	(12)	(13)
1965 . . .	5,923	2,595	2,935	11,453	30,130
1966 . . .	6,176	3,151	3,540	12,671	39,906
1967 . . .	6,854	3,721	3,900	14,475	44,003
1968 . . .	7,757	4,491	4,550	16,798	49,201
1969 . . .	8,559	4,926	5,016	18,501	55,404
1970 . . .	8,796	5,737	5,777	20,310	60,647
1971 . . .	10,767	6,821	6,048	23,136	68,317
1972(P) . . .	11,357	7,203	7,269	26,829	80,312

\*States include Union Territories

Source :—(i) Central and State Budgets.

(ii) Ministry of Finance (Department of Revenue).

(P) Provisional.

TABLE No. 7 (2)

## AVERAGE REVENUE PER VEHICLE DURING 1970-71

(Figures in Rs.)

State/ Union Territory	Motor Cycles	Auto- rick- shaws	Jeeps	P.M. Cars	Taxis	Other public vehicles	Goods Vehicles	Misc. vehicles	All Vehicles
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh	31	118	53	135	325	10,503	1,039	63	1,029
Assam	39	13	110	147	286	952	762	132	367
Bihar	31	158	113	113	301	1,193	1,376	189	432
Gujarat	38	158	152	152	243	1,795	1,423	183	454
Kerala	35	112	112	422	372	3,076	1,721	56	700
Maharashtra	35	112	46	86	115	241	1,389	13	398
Madhya Pradesh	35	112	72	166	185	4,441	2,565	386	757
Tamil Nadu	43	107	162	166	527	15,103	2,670	563	1,416
Nagaland	—	71	116	98	—	3,257	2,478	115	236
Orissa	41	—	9	39	108	—	31	8	868
A & N Islands	19	—	—	—	—	—	—	—	25
Delhi	27	—	—	47	1,080	—	625	—	115
Dadra & Nagar Haveli	—	—	—	—	—	—	—	—	84
Goa, Daman & Diu	11	—	38	52	—	539	303	5	258
Imphal	24	—	182	50	87	489	592	27	152
Punjab	—	—	—	—	—	—	—	—	258
TOTAL	47	129	81	132	294	5,472	1,674	160	703

£ = Included in Taxis.

@ = Included in Private Motor Cars.



TABLE No. 7(3)

# RATES OF SALES TAX ON MOTOR SPIRIT AND HIGH SPEED DIESEL OIL AS ON 31-12-1970 STATEWISE

State/Union Territory	On motor spirit		On high speed diesel	
	Rate of Sales tax	Date from which effective	Rate of sales tax	Date from which effective
(1)	(2)	(3)	(4)	(5)
Andhra Pradesh.	10 P/litre	1-7-68	10 P/litre	1-7-68
Assam	15 P/litre	18-10-67	11 P/litre	18-10-67
Bihar %	12 P/litre	1-8-68	9 P/litre	1-11-65
Gujarat	15 P/litre	22-9-70	8 P/litre	22-9-70
Haryana	6 P/litre	8-5-68	6 P/litre	8-5-68
Jammu & Kashmir	10 P/litre	21-9-67	10 P/litre	1-8-62
Himachal Pradesh	7 P/litre	28-9-68	7 P/litre	28-9-68
Kerala	20 %	1-4-58	20 %	1-4-58
Maharashtra	7 P/litre	1-9-69	6 P/litre	1-1-66
Madhya Pradesh@	7 P/litre	1-4-66	7 P/litre	1-4-65
Mysore	12 P/litre	1-4-70	12 P/litre	1-4-70
Nagaland	8 P/litre	1-4-70	7 P/litre	1-4-70
Orissa	12 P/litre	15-5-66	9 P/litre	15-5-66
Punjab	9 P/litre	31-10-66	7 P/litre	21-10-66
Rajasthan	15 %	8-3-69	10 %	8-3-69
Tamil Nadu	12 P/litre	26-2-70	10 P/litre	26-2-70
Uttar Pradesh	10 P/litre	1-10-69	7 P/litre	1-12-62
West Bengal	15 P/litre	15-10-59	10 P/litre	15-10-59
Andaman & Nicobar Islands	No sales tax		No sales tax	
Chandigarh	9 P/litre	1-11-66	9 P/litre	1-11-66
Delhi	7 %	15-5-63	7 %	15-5-63
Goa, Daman & Diu	10 %	1-4-69	10 %	1-4-69
Manipur	12 P/litre	21-12-67	7 P/litre	27-7-65
Pondicherry	3 %	1-4-66	3 %	1-4-66
Tripura	No local sales tax law		11 P/litre	
Meghalaya	15 P/litre			

%Tax on M. S. and H. S. D oil is levied under the Bihar Motor Spirit (Taxation on Sales) Act, 1939 and tax on motor vehicles and motor vehicle spare parts is levied under the Bihar Sales Tax Act, 1959.

@Under the M. P. sales of motor spirit taxation Act, 1967.

TABLE No. 7(4)

# RATES OF SALESTAX ON MOTOR VEHICLES AND MOTOR VEHICLE SPARE PARTS AS ON 31.12.1970—STATE-WISE

State/Union Territory	Motor Vehicles		Motor Vehicle spare parts	
	Rates on sales tax	Date from which effective	Rate of sales tax	Date from which effective
(1)	(2)	(3)	(4)	(5)
Andhra Pradesh.	10%	1-8-63	10%	1-8-63
Assam @	12%	25-10-67	12%	25-10-67
Bihar	10%	1-11-65	10%	1-11-65
Gujarat	10%	6-5-70	12%	6-5-70
Haryana	10%	1-4-63	10%	1-4-63
Jammu & Kashmir	10%	15-5-68	9%	1-7-66
Himachal Pradesh	10%	1-12-70	10%	1-12-70
Kerala	13%	1-4-70	13%	1-4-70
Maharashtra	12%	1-9-69	12%	1-9-69
Madhya Pradesh	10%	1-4-68	10%	1-4-68
Mysore	12%	1-4-70	12%	1-4-70
Nagaland	10%	1-4-70	10%	1-4-70
Orissa	10%	1-4-63	10%	1-4-63
Punjab	10%	1-4-63	10%	1-4-63
Rajasthan	10%	8-3-69	10%	8-3-69
Tamil Nadu	15%	26-2-70	13%	26-2-70
Uttar Pradesh	10%	1-6-63	10%	24-10-68
West Bengal	12%	16-11-67	12%	16-11-67
Andaman & Nicobar Islands	No sales Tax		No sales Tax	
Chandigarh	10%	1-11-66	10%	1-11-66
Delhi	10%	1-6-63	10%	1-6-63
Goa, Daman & Diu	10%	3-11-64	10%	1-11-64
Manipur	10%	26-5-65	10%	26-5-65
Pondicherry	10%	1-4-66	10%	1-4-66
Tripura	No local sales tax law		No local sales tax law	
Meghalaya	12%		12%	

@ Position as on 31st December, 1968.

£ Under the M. P. General Sales Act, 1958.

+ Single point.

TABLE No. 7 (5)  
GOODS AND PASSENGER TAX AS ON 31-3-1971  
(STATE-WISE)

States/U.T.s	Goods Tax as %age of freight	Passenger Tax as Percentage of fare
(1)	(2)	(3)
Andhra Pradesh . . . . .	Nil	Nil
Assam@ . . . . .	10	10
Bihar . . . . .	12	12½
Gujarat . . . . .	3	1—23
Haryana . . . . .	40	40
Jammu & Kashmir	Nil	20
Madhya Pradesh@ . . . . .	10	15
Maharashtra . . . . .	3	22
Mysore . . . . .	175	10
Punjab* . . . . .		25
Rajasthan . . . . .	25 (Metalled Roads) 20 (Other Roads)	25 (Metalled Roads) 20 (Other Roads)
Tamil Nadu . . . . .	5	10
Uttar Pradesh . . . . .	8	15
West Bengal . . . . .	Nil	Nil
Andaman & Nikobar Islands	Nil	Nil
Dadra & Nagar Haveli . . . . .	Goods Tax is not levied.	Passenger Tax is not applicable (31-3-71)
Chandigarh . . . . .		35

@As on 31-3-1968

\*As on 31-3-1967.

Note — For details refer to Motor Transport Statistics, 1970-71, Min of Shipping & Transport.

TABLE No. 7(6)  
ANNUAL VEHICLE TAX ON TRUCKS AS ON 31-3-1971  
(STATE-WISE)

(In Rs.)

States/U.Ts.	TRUCKS		
	6.5 Tonne Pay load	9.5 Tonne Pay load	Above 9.5 Tonne Pay load
(1)	(2)	(3)	(4)
Andhra Pradesh	2,850	3,250	3,550
Assam*			
(i) Private Carrier	1,450	2,050	420
(ii) Public Carrier	1,575	2,205	420
Bihar	1,295	2,575	80
Gojara†	1,532	2,684	1,110
Haryana	594	875	1,000
Jammu & Kashmir	393	393	393
Kerala	2,150	3,600	800
Madhya Pradesh*	1,435	2,160	1,825
Malabar†	1,650	2,050	1,200
Mizore	2,800	3,600	500
Nepal	2,300	3,000	2,000
Norfolk*	594	875	594
Odisha*	2,350	2,310	2,350
Tamil Nadu	3,600	3,700	883
West Punjab	1,701	2,475	...
West Bengal	1,475	2,575	575
West Assam†	594	...	875

TABLE No. 7 (6)—*Contd.*

(1)		(2)	(3)	(4)
Delhi . . . . .		750	1,250	1,250
Goa, Daman & Diu . . . . .		920	1,330	...
Hamachal Pradesh (i) . . . . .		594	875	875
(ii) . . . . .		200	300	400
Pondicherry . . . . .		2,400	3,200	.
Tripura** . . . . .		150	200	300

\*As on 31-3-1968.

\*\*As on 31-3-1967.

£As on 31-3-1970.

Note.—The above figures relate to the minimum tax.

(1) The tax levied varies according to the additional capacity of the truck/trailer added.

(2) In certain States tax is levied on the basis of Registered laden weight or of unladen weight. For the purpose of this statement approximate R.L.W. or U.L.W. corresponding to indicated Pay loads have been considered. For details refer to Motor Transport Statistics, 1970-71, Ministry of Shipping & Transport.

TABLE No. 7(7)

ANNUAL VEHICLES TAX ON PASSENGER BUSES AS ON 31-3-1971  
STATE-WISE

(In Rupees)

State/U. T.	BUSES			
	40 Seats	52 Seats	60 Seats	Above 60 seats
(1)	(2)	(3)	(4)	(5)
<i>Andhra Pradesh*</i>				
Andhra Area (1) Town Services	9,600	12,584	14,400	24,000
(2) Mofussil Services	9,600	12,480	14,400	24,000
Telangana Area (1) Town Services	8,960	11,648	13,440	22,400
(2) Mofussil Services	8,960	11,048	13,440	22,400
Assam*	2,240	2,912	3,360	5,600
Bihar*	2,190	2,550	2,790	600
Gujarat	1,392	1,776	2,032	400
Haryana	4,200	4,200	4,200	10,000
Jammu & Kashmir	395	395	—	—
Kerala*	5,600	7,280	8,400	14,000
Madhya Pradesh*	2,250	3,210	3,850	6,000
Maharashtra	2,200	2,880	3,320	24,000
Mysore	4,800	6,240	7,200	3,000
Orissa	4,800	6,240	7,200	40,000
Punjab*	2,150	2,750	2,750	2,750 (Max)
Rajasthan*	1,600	2,600	3,000	5,000
Tamil Nadu	9,600	12,480	14,400	6,000
Uttar Pradesh*	1,452	1,124	2,572	5,000
West Bengal	2,190	2,550	2,790	198,000

TABLE No. 7(7)—Contd.

(1)	(2)	(3)	(4)	(5)
A. & N. Islands*	The tax on motor vehicles (other than motor cars) used for carrying passengers on hire is Rs. 75).			
Chandigarh§	2,150	2,750	2,750	...
Delhi	2,150	2,750	2,750	2,750
Himachal Pradesh	700	700	No bus of higher capacity	
Nagaland§	Nil	Nil	Nil	Nil
Tripura**	161	185	201	...
Goa, Daman & Diu	950	1,250	1,450	400
Dadra & Nagar Haveli	No tax on stage carriages is applicable			

\*As on 31-3-1968.

\*\*As on 31-3-1967.

§As on 31-3-1970.

(A) Plus 30 for every additional person beyond 33 persons.

(B) Plus 32 for every additional sitting passenger in excess of 9 and 16 per standing passenger.

NOTE.—Relates to minimum tax. The tax varies according to the capacity. For details refer to Motor Transport Statistics, 1970-71, Ministry of Shipping & Transport.

**SECTION 9—ACCIDENTS IN TRANSPORT**



TABLE No. 8(1)

MOTOR VEHICLE ACCIDENTS DURING 1971 (MONTH-WISE)  
(FOR REPORTING STATES/UNION TERRITORIES)

State/Union Territory	Total	Jan.	Feb.	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh . . .	3565	273	295	263	313	348
Assam . . . . .	691	65	59	70	71	55
Bihar . . . . .	4062	375	301	349	376	415
Gujarat . . . . .	4194	360	391	334	408	449
Haryana . . . . .	732	13	60	54	61	78
Himachal Pradesh . . .	246	10	17	20	23	20
Jammu & Kashmir . . .	528	23	36	47	51	82
Kerala . . . . .	1319	349	336	381	378	391
Maharashtra . . . . .	40793	3593	3316	3316	3160	3717
Mysore . . . . .	5679	455	186	506	498	535
Orissa . . . . .	2209	228	205	223	197	212
Tamil Nadu . . . . .	14950	1266	1148	1218	1182	1293
Punjab . . . . .	746	48	60	54	56	50
West Bengal* . . . . .	11088	1060	892	706	874	1019
Delhi . . . . .	6801	613	575	653	539	594
Dadra & Nagar Haveli . .	15	—	4	1	2	2
Goa, Daman & Diu . . .	837	72	58	77	83	82
Manipur . . . . .	157	17	13	21	16	20
Pondicherry . . . . .	184	14	16	11	9	15
Tripura . . . . .	263	19	21	17	15	24
Chandigarh . . . . .	124	11	5	12	7	14
A. & N. Islands . . . . .	41	4	4	3	3	3
Arunachal Pradesh . . .	13	1	—	2	—	2
<b>TOTAL . . . . .</b>	<b>102237</b>	<b>8929</b>	<b>8384</b>	<b>8341</b>	<b>8622</b>	<b>9420</b>

\*For Calcutta City only.

TABLE No. 8(1)—Contd.

State/Union Territory	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
(1)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Andhra Pradesh . . .	336	304	312	274	243	294	310
Assam . . . . .	47	59	51	46	53	58	57
Bihar . . . . .	372	300	247	309	305	325	308
Gujarat . . . . .	321	335	298	284	309	369	336
Haryana . . . . .	81	57	53	50	72	57	60
Himachal Pradesh . .	27	14	21	23	23	21	27
Jammu & Kashmir . .	48	63	38	59	42	16	23
Kerala . . . . .	315	347	360	368	354	373	367
Maharashtra . . . .	3153	3273	3376	3405	3370	3448	3336
Mysore . . . . .	484	443	445	435	480	474	438
Orissa . . . . .	192	168	149	169	139	160	167
Tamil Nadu . . . . .	1297	1192	1240	1354	1304	1271	1185
Punjab . . . . .	67	59	56	65	65	98	66
West Bengal* . . . .	839	1017	967	902	887	919	955
Delhi . . . . .	615	608	610	562	510	468	424
Dadra & Nagar Haveli	1	1	—	2	2	—	—
Goa, Daman & Diu . .	78	48	58	66	65	91	58
Manipur . . . . .	10	7	8	5	10	13	17
Pondicherry . . . . .	15	18	15	13	19	12	24
Tripura . . . . .	35	29	19	18	16	30	20
Chandigarh . . . . .	9	17	11	9	15	6	8
A. & N. Islands . . .	2	1	2	6	5	4	4
Arunachal Pradesh . .	—	2	—	3	1	1	1
<b>TOTAL . . . . .</b>	<b>8394</b>	<b>8362</b>	<b>8336</b>	<b>8427</b>	<b>8290</b>	<b>8508</b>	<b>8224</b>

\*For Calcutta City only

TABLE No. 8(2)

## MOTOR VEHICLE ACCIDENTS DURING—1971 BY CLASS OF MOTOR VEHICLES INVOLVED

State/Union Territory	Total	Motor Cycles	Auto-rickshaws	Jeeps	Motor Cars
(1)	(2)	(3)	(4)	(5)	(6)
Andhra Pradesh	3566	323	93	244	394
Assam	691	34	8	89	121
Bihar	4062	332	42	338	572
Gujarat	4194	344	356	187	381
Haryana	732	37	13	36	68
Himachal Pradesh	246	4	—	50	10
Jammu & Kashmir	528	22	19	33	45
Kerala	4319	234	187	314	820
Maharashtra	40793	2222	550	925	13598
Mysore	5679	672	494	193	763
Punjab	746	65	4	31	112
Tamil Nadu	14950	1782	146	408	2816
Orissa	2209	103	5	245	297
Delhi	6801	1127	469	311	1703
Goa, Daman & Diu	837	175	2	60	131
Dadra & Nagar Haveli	15	7	—	1	—
Manipur	157	8	—	40	2
Pondichery	184	34	15	9	28
Tripura	263	23	1	85	15
Chandigarh	124	16	5	9	31
A. & N. Islands	41	9	—	—	—
Arunachal Pradesh	13	1	—	—	5
<b>TOTAL</b>	<b>91149</b>	<b>7579</b>	<b>2417</b>	<b>3608</b>	<b>21912</b>

TABLE No. 8(2)—Contd.

State/Union Territory	Motor Cabs	Buses	Goods Vehicles	Misc. Vehicles	Class Not known
(1)	(7)	(8)	(9)	(10)	(11)
Andhra Pradesh . . . . .	299	652	1160	324	76
Assam . . . . .	36	109	216	46	30
Bihar . . . . .	325	361	1406	353	333
Gujarat . . . . .	256	681	1423	399	167
Haryana . . . . .	10	115	345	98	10
Himachal Pradesh . . . . .	3	57	105	17	—
Jammu & Kashmir . . . . .	32	74	277	10	16
Kerala . . . . .	793	852	854	198	67
Maharashtra . . . . .	4975	7517	7773	2862	363
Mysore . . . . .	389	783	1839	427	119
Punjab . . . . .	1	93	201	114	125
Tamil Nadu . . . . .	2043	3522	3036	947	250
Orissa . . . . .	92	286	849	252	75
Delhi . . . . .	560	970	1370	111	174
Goa, Daman & Diu . . . . .	42	143	234	47	3
Dadra & Nagar Haveli . . . . .	3	—	3	1	—
Manipur . . . . .	..	18	51	33	5
Pondicherry . . . . .	9	30	37	13	9
Tripura . . . . .	5	32	71	9	22
Chandigarh . . . . .	—	22	19	21	1
A. & N. Islands . . . . .	3	22	5	2	—
Arunachal Pradesh . . . . .	—	—	6	1	—
<b>TOTAL</b> . . . . .	<b>9876</b>	<b>16339</b>	<b>21286</b>	<b>6287</b>	<b>1845</b>

STATE-WISE RATES OF ACCIDENTS BY CLASS OF MOTOR VEHICLES ON ROAD (1971)  
(PER 1000 VEHICLES)

State/Union Territory	All types of Vehicles	Motor Cycles	Auto-rickshaws	Jeeps	Motor Cars	Motor Cabs	Buses	Goods Vehicles	Misc. Vehicles
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh	28.32	7.10	100.87	33.64	4.11	112.58	92.29	5.89	29.99
Assam	14.59	6.22	102.56	18.23	10.50	13.18	10.99	14.71	10.77
Bihar	52.95	14.80	270.97	16.18	31.34	108.01	79.83	80.58	52.95
Gujarat	28.34	6.89	42.87	23.42	17.59	153.39	122.42	43.90	10.25
Haryana	33.18	5.20	21.10	32.73	30.52	76.14	116.10	69.28	20.00
Uttar Pradesh	33.11	5.41	—	79.62	51.02	20.00	81.43	56.79	47.22
Jammu & Kashmir	47.57	11.11	350.49	15.53	10.67	88.89	67.27	55.10	50.00
Kerala	50.08	15.40	176.08	65.04	24.63	89.62	129.02	61.88	61.01
Maharashtra	131.99	26.32	136.66	73.12	130.07	310.34	699.97	133.18	177.25
Mysore	45.31	14.86	76.71	35.91	25.64	181.78	117.57	93.26	51.41
Punjab	18.14	4.23	16.00	22.90	13.13	1.55	33.84	21.74	30.10
Tamil Nadu	119.33	64.43	73.55	98.77	65.28	238.17	167.48	172.50	310.84
Orissa	65.55	10.59	14.64	19.53	72.28	72.21	153.68	107.15	97.14
Delhi	37.69	12.09	45.89	—	30.17	145.76	318.24	101.03	—

TABLE No. 8(3)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dadra & Nagar Haveli	39.37	31.25	—	43.48	—	1000.00	—	93.75	—
Goa, Daman & Diu	62.84	43.93	64.52	—	34.10	—	102.58	57.52	—
Manipur	57.05	21.22	—	43.48	8.66	—	78.26	64.15	190.95
Pondicherry	51.44	24.67	937.50	89.11	22.51	236.84	303.03	159.48	46.91
Tripura	65.93	55.02	500.00	75.02	57.92	64.94	118.96	56.08	75.43
Chandigarh	17.51	3.54	6.08	64.75	21.28	—	125.00	372.55	132.53
A. & N. Islands	39.96	24.26	—	—	—	100.00	733.33	17.36	16.81
Total	40.86	13.16	65.74	43.69	40.61	163.39	173.99	62.12	47.03

TABLE No. 3(4)

## MOTOR VEHICLE ACCIDENTS DURING 1971 BY NATURE OF ACCIDENTS

State/Union Territory	Total	Collision with					Animals	Trees	Trains	Other Kind of accidents
		Other motor vehicles	Cyclists	Cycle Rickshaws	Bullock Carts	Pedestrians				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Andhra Pradesh	3,565	678	422	104	205	1,208	77	48	39	764
Assam	691	144	84	2	18	219	11	6	7	200
Bihar	4,062	249	377	48	188	1,098	126	58	135	1,785
Gujarat	4,194	1,174	410	101	119	935	145	75	—	1,244
Haryana	732	58	102	61	38	84	—	45	9	335
Himachal Pradesh	246	54	2	—	—	10	8	1	—	171
Jammu & Kashmir	528	175	20	—	4	150	—	6	—	173
Kerala	4,319	523	340	46	26	2,112	5	38	13	1,216
Maharashtra	43,793	22,554	1,920	130	356	8,447	511	171	197	6,507
Mysore	5,679	869	474	24	186	2,079	97	181	23	1,746
Punjab	746	143	197	17	24	148	8	6	2	201
Tamil Nadu	14,950	4,223	2,086	267	564	4,111	194	194	15	3,296

TABLE No. 8(4)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Odesa	2,209	178	171	81	59	483	123	55	29	1,030
Delhi	6,801	3,098	1,308	39	45	1,771	173	20	5	341
Dadra & Nagar Haveli	15	2	—	—	—	5	—	1	—	7
Goa, Daman & Diu	837	316	65	—	6	178	19	17	3	233
Mumbai	157	21	26	3	1	30	5	1	8	62
Pondicherry	104	31	32	7	6	85	—	2	—	21
Tripura	263	8	5	1	—	130	2	4	—	115
Chandigarh	124	46	45	5	1	16	1	—	1	9
A. & N. Islands	41	8	7	—	—	8	2	1	1	14
Arunachal Pradesh	13	5	—	—	—	3	—	—	—	5
<b>TOTAL</b>	<b>91,149</b>	<b>34,557</b>	<b>8,111</b>	<b>936</b>	<b>1,947</b>	<b>23,310</b>	<b>1,507</b>	<b>930</b>	<b>508</b>	<b>19,443</b>



TABLE No. 8(5)

## MOTOR VEHICLE ACCIDENTS DURING 1971 BY PRIMARY CAUSES OF ACCIDENTS

State/Union Territory	Total	Fault of driver of M.V.	Fault of driver of vehicle other than M.V.	Fault of cyclists	Fault of pedestrians
(1)	(2)	(3)	(4)	(5)	(6)
Andhra Pradesh	3,565	2,086	53	230	392
Assam	691	389	65	29	49
Bihar	4,062	1,839	548	199	403
Gujarat	4,194	2,978	117	240	365
Haryana	732	453	17	45	54
Himachal Pradesh	246	201	3	—	3
Jammu & Kashmir	528	249	25	8	21
Kerala	1,319	2,944	79	165	361
Maharashtra	10,793	7,449	1,933	1,221	5,202
Mysore	5,679	1,613	250	55	183
Punjab	746	630	34	14	2
Tamil Nadu	14,950	9,137	741	892	1,561
Orissa	2,209	1,393	34	73	241
Delhi	6,801	6,573	14	78	28
Dadra & Nagar Haveli	15	2	1	—	3
Goa, Daman & Diu	837	357	59	32	82
Manipur	157	41	—	9	5
Pondicherry	184	76	12	9	38
Tripura	263	177	9	2	25
Chandigarh	124	120	1	—	—
A. & N. Islands	41	27	—	1	8
Arunachal Pradesh	13	6	—	—	1
TOTAL	91,149	41,740	4,001	3,302	9,021

TABLE No. 8(5)—*Contd.*

State/Union Territory	Fault of Passengers	Defect in mechanical condition of M.V.	Defective road surface	Bad weather conditions	Other causes	Causes not known
(1)	(7)	(8)	(9)	(10)	(11)	(12)
Andhra Pradesh . . . . .	65	201	23	14	428	73
Assam . . . . .	17	34	17	1	46	50
Bihar . . . . .	190	221	65	60	261	276
Gujarat . . . . .	18	214	23	20	192	27
Haryana . . . . .	5	92	3	29	23	11
Himachal Pradesh . . . . .	—	21	2	—	19	9
Jammu & Kashmir . . . . .	4	59	5	5	81	71
Kerala . . . . .	72	240	98	67	159	134
Maharashtra . . . . .	150	1,187	350	451	2,099	1,853
Mysore . . . . .	48	224	26	15	171	94
Punjab . . . . .	6	6	5	2	47	—
Tamil Nadu . . . . .	463	560	77	81	888	550
Orissa . . . . .	6	229	58	13	123	39
Delhi . . . . .	24	3	4	2	56	18
Dadra & Nagar Haveli . . . . .	—	5	—	1	2	1
Goa, Daman & Diu . . . . .	16	95	29	58	110	8
Manipur . . . . .	1	24	4	2	23	48
Madicherry . . . . .	5	3	—	—	14	27
Tripura . . . . .	3	17	—	10	14	6
Chandigarh . . . . .	1	—	—	—	1	1
A. & N. Islands . . . . .	—	5	—	—	—	—
Arunachal Pradesh . . . . .	1	1	2	—	1	1
TOTAL . . . . .	1,095	3,441	783	831	23644	3,291

TABLE NO. 8(6)

## MOTOR VEHICLE ACCIDENTS DURING 1971 BY TIME OF DAY

State/Union Territory	Total	Day Light	Darkness	Time not known
(1)	(2)	(3)	(4)	(5)
Andhra Pradesh	3,563	2,552	983	30
Astam	691	447	206	38
Bihar	4,062	2,361	1,157	544
Gujarat	1,191	3,174	1,101	19
Harachal Pradesh	296	191	55	10
Haryana	732	510	186	36
Jammu & Kashmir	528	389	80	59
Kerala	1,314	3,205	1,069	45
Maharashtra	10,793	29,378	1,366	159
Mazore	5,679	1,279	1,466	34
Punjab	746	195	270	41
Tamil Nadu	11,950	10,188	4,501	258
Orissa	2,209	1,117	644	118
West Bengal*	11,088	4,352	5,428	1,308
Delhi	6,801	4,537	2,063	201
Dadra & Nagar Haveli	15	7	8	—
Goa, Daman & Diu	837	671	160	3
Manipur	157	114	38	10
Pondicherry	181	143	41	—
Tripura	263	206	48	9
Chandigarh	124	78	39	7
A & N. Islands	41	16	25	—
Arunachal Pradesh	13	12	1	—
TOTAL	1,02,237	68,685	30,623	2,929

\* For Calcutta City only.

TABLE No. 8(7)

# MOTOR VEHICLE ACCIDENTS\* DURING 1971 BY CONDITION OF MOTOR VEHICLE INVOLVED

State/Union Territory	Total	Over loaded	Defective brakes	Defective steering	Insufficient or no light	Puncture or burst	Other serious mechanical defects	Left hand steering defects
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Andhra Pradesh . . . . .	331	84	67	32	16	26	60	46
Assam . . . . .	387	61	89	40	54	27	49	67
Bihar . . . . .	611	319	113	42	23	12	31	71
Gujarat . . . . .	394	152	63	45	44	29	33	28
Haryana . . . . .	132	40	8	3	12	21	48	—
Himachal Pradesh . . . . .	47	13	8	3	1	—	9	13
Jammu & Kashmir . . . . .	78	1	17	4	—	3	35	18
Kerala . . . . .	568	246	95	5	7	3	130	82
Maharashtra . . . . .	2,307	717	307	171	116	204	389	403
Mysore . . . . .	563	219	93	19	5	51	112	64
Punjab . . . . .	38	10	6	1	15	2	—	4
Tamil Nadu . . . . .	3,088	393	687	188	169	169	1,087	395
Orissa . . . . .	568	191	93	17	17	50	52	148
Goa, Daman & Diu . . . . .	124	26	34	13	14	2	32	3
Manipur . . . . .	36	2	7	1	4	4	15	3
Pondicherry . . . . .	17	14	3	—	—	—	—	—
Dadra & Nagar Haveli . . . . .	5	2	3	—	—	—	—	—
A. & N. Islands . . . . .	5	—	4	—	—	—	—	—
Arunachal Pradesh . . . . .	7	4	—	—	—	—	—	3
<b>TOTAL</b>	<b>9,306</b>	<b>2,494</b>	<b>1,697</b>	<b>584</b>	<b>497</b>	<b>604</b>	<b>2,082</b>	<b>1,348</b>

\*Include only accidents in which the conditions of motor vehicles were responsible for accidents.

TABLE No. 8(8)

**MOTOR VEHICLE ACCIDENTS IN 1971 IN WHICH COMMERCIAL  
VEHICLES WERE INVOLVED BY STATUS OF CERTIFICATE  
OF FITNESS**

State/Union Territory	Total	Certificate of fitness in force	Certificate of fitness not in force	Particu- lars of certific- ate of fit- ness not known
(1)	(2)	(3)	(4)	(5)
Andhra Pradesh . . . . .	2,111	1,926	88	97
Assam . . . . .	247	189	16	42
Bihar . . . . .	2,134	1,875	125	134
Gujarat . . . . .	2,716	2,566	109	41
Haryana . . . . .	470	353	20	97
Himachal Pradesh . . . . .	165	98	8	59
Jammu & Kashmir . . . . .	268	163	2	103
Kerala . . . . .	2,794	2,526	181	87
Maharashtra . . . . .	20,777	18,444	294	2,039
Mysore . . . . .	3,481	3,219	132	133
Punjab . . . . .	286	190	24	72
Tamil Nadu . . . . .	8,585	7,936	240	409
Orissa . . . . .	1,327	741	315	271
Goa, Daman & Diu . . . . .	419	419	—	—
Manipur . . . . .	107	44	—	63
Pondicherry . . . . .	83	83	—	—
Dadra & Nagar Haveli . . . . .	—	—	—	—
A. & N Islands . . . . .	30	29	1	—
Arunachal Pradesh . . . . .	4	1	—	3
<b>TOTAL . . . . .</b>	<b>46,007</b>	<b>40,802</b>	<b>1,555</b>	<b>3,650</b>

TABLE No. 8(9)

RATE OF CASUALTIES IN MOTOR VEHICLE ACCIDENTS  
DURING 1971

State/Union Territory	Total casualties	No. of persons killed	No. of persons injured	Casualties per hundred accidents		
				Total	Persons killed	Persons injured
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh . . .	3,760	1,166	2,594	103.47	32.71	72.76
Assam . . . . .	1,172	326	846	169.61	47.18	122.43
Bihar . . . . .	3,396	812	2,584	83.60	19.99	63.61
Gujarat . . . . .	4,450	850	3,600	106.10	20.27	85.83
Haryana . . . . .	1,034	300	734	141.25	40.98	100.27
Himachal Pradesh . .	551	105	446	223.93	32.68	181.30
Jammu & Kashmir . .	719	158	561	136.17	29.92	106.25
Kerala . . . . .	4,859	536	4,323	112.57	12.41	100.16
Maharashtra . . . .	17,466	1,674	15,592	42.82	4.60	38.22
Mysore . . . . .	8,590	1,257	7,333	151.26	22.13	129.13
Punjab . . . . .	799	470	329	107.10	63.00	44.10
Tamil Nadu . . . . .	11,685	1,592	9,993	78.16	11.32	66.84
Orissa . . . . .	1,931	302	1,629	87.42	13.67	73.75
West Bengal* . . . .	3,188	418	2,770	28.75	3.77	24.98
Delhi . . . . .	4,045	410	3,635	59.48	6.03	53.45

\*For Calcutta City only.

TABLE B(9)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dadra & Nagar Haveli .	25	—	25	166.67	—	166.67
Goa, Daman & Diu . .	8,60	44	616	78.85	5.26	73.59
Manipur . . . . .	277	29	248	176.43	18.47	157.96
Pondicherry . . . .	201	18	183	109.24	9.78	99.46
Tripura . . . . .	291	49	242	110.65	18.63	92.02
Chandigarh . . . . .	149	24	125	120.16	19.35	100.81
A & N Islands . . . .	70	9	61	170.73	21.95	148.78
	22	41	10	169.23	30.77	138.46
<b>TOTAL</b>	<b>69,340</b>	<b>10,053</b>	<b>52,487</b>	<b>67.82</b>	<b>10.62</b>	<b>57.21</b>

\* For Calcutta City only.

TABLE No. 8(10)

## STATE-WISE TREND OF MOTOR VEHICLE ACCIDENTS 1966-71

State/Union Territory	1966	1967	1968	1969	1970	1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh . . .	2,724	2,691	2,689	3,027	3,260	3,565
Assam . . . . .	1,192	1,192	979	1,169	1,024	691
Bihar . . . . .	3,086	3,323	3,762	3,687	3,921	4,062
Gujarat . . . . .	2,638	2,795	3,343	3,191	3,851	4,194
Haryana . . . . .	—	—	476	558@	556@@	732
Himachal Pradesh . .	131	222	219	231	238	246
Jammu & Kashmir . .	160**	180(E)	202	159	530	528
Kerala . . . . .	2,916	3,313	3,768	4,156	4,214	4,319
Maharashtra . . . .	9,079	32,625	34,283	34,077	36,115	40,793
Mysore . . . . .	3,196	3,636	4,141	4,980(E)	5,821	5,679
Madhya Pradesh . . .	3,030*	3,068	...	...	...	...
Nagaland . . . . .	...	...	...	36	25	...
Orissa . . . . .	1,728	1,921	2,119	2,143	2,045	2,209
Punjab . . . . .	743***	534	550(E)	570	836	746
Rajasthan . . . . .	665	795	999	1,257	1,576	...
TamilNadu . . . . .	8,685	9,519	10,190	11,696	12,486	14,950
Uttar Pradesh . . . .	...	...	...	5,706	6,822	5,856
West Bengal . . . . .	23,473	...	21,177	17,512	15,336	...
A & N Islands . . . .	13	14	25	54	34	41



TABLE No. 8(10)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Chandigarh . . . . .	—	—	—	113	—	..
Delhi . . . . .	8,256*	7,794	7,742	8,014	7,703	6,801
Dadra & Nagar Haveli . . . . .	..	..	..	12	13	15
Goa, Daman & Diu . . . . .	419	480	598	665	817	837
Manipur . . . . .	120	125	128	116	125	157
Pondicherry . . . . .	127	113	136	167	186	184
Tripura . . . . .	105	120	155	172	177	263
Arunachal Pradesh . . . . .	...	..	..	..	..	13

@For the year 1968-69.

@@For the year 1969-70.

\*for 1965.

\*\*For 1963. (E) Estimate

\*\*\*For the year 1964.

TABLE No. 8(11)

TREND IN STATE-WISE M.V. ACCIDENT RATES PER 1000 OF  
VEHICLES ON ROAD (1966-71)

State/Union Territory	1966	1967	1968	1969	1970	1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Andhra Pradesh .	38.5	32.0	29.8	33.5	31.3	26.3
2. Assam . . .	39.0	35.6	27.8	31.0	24.0	14.6
3. Bihar . . .	70.3	66.4	65.0	61.2	61.7	53.0
4. Gujarat . . .	34.5	32.5	34.0	28.8	30.4	28.9
5. Haryana . . .	—	—	34.0	32.6	28.6	33.5
6. Jammu & Kashmir .	18.5	20.0	20.9	15.3	47.0	47.0
7. Kerala . . .	65.7	66.9	62.3	59.5	53.9	50.1
8. Madhya Pradesh .	54.8	52.3	...	...	...	...
9. Maharashtra . .	52.9	167.9	158.4	140.0	130.0	132.0
10. Mysore . . .	42.4	44.0	51.5	53.1	52.9	45.5
11. TamilNadu . . .	111.7	110.4	108.9	112.3	105.7	119.5
12. Nagaland . . .	...	...	...	25.7	12.4	...
13. Orissa . . .	79.8	75.9	84.1	75.7	63.9	65.5
14. Punjab . . .	20.0	17.1	16.3	15.8	22.0	18.1
15. Rajasthan . . .	13.6	15.6	16.0	17.6	20.1	...
16. Uttar Pradesh .	...	...	...	52.9	55.8	...
17. West Bengal . .	138.8	...	...	102.7	95.1	...
18. Himachal Pradesh .	42.0	67.1	60.8	58.5	54.2	53.1

TABLE No. 8(11)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
19. A. & N. Islands	26.6	25.5	30.1	71.7	39.3	40.0
20. Delhi	100.7	92.1	69.3	61.9	51.2	37.7
21. Dadra & Nagar Haveli	..	..	..	51.1	20.1	39.4
22. Goa, Daman & Diu	34.7	38.6	51.2	58.6	67.9	62.0
23. Chandigarh	..	..	..	27.1	..	17.5
24. Pondicherry	110.5	77.4	30.7	53.5	52.0	51.4
25. Manipur	57.9	60.3	55.4	48.2	48.7	57.1
26. Tripura	46.5	46.9	52.9	51.4	46.2	65.9

TABLE No. 8(12)  
TREND IN RAILWAY ACCIDENTS  
(1962-63—1971-72)

Year	Colli- sions	Derail- ments	Fires in trains	Accidents involving trains at accident level crossings	Total train accidents
(1)	(2)	(3)	(4)	(5)	(6)
1962-63 . . .	98	1,316	55	168	1,637
1963-64 . . .	93	1,300	81	161	1,635
1964-65 . . .	81	1,035	31	146	1,293
1965-66 . . .	74	952	42	123	1,201
1968-69 . . .	47	684	48	129	908
1969-70 . . .	54	751	47	111	963
1970-71 . . .	59	648	12	121	840
1971-72 . . .	57	667	22	118	864

Source—Indian Railways, 1971-72.

**SECTION 9 : PUBLIC SECTOR MOTOR TRANSPORT**

## PUBLIC SECTOR MOTOR TRANSPORT INDUSTRY

Nationalised passenger service exist in all the States and Union Territories, except Tripura, Pondicherry, Goa, Daman & Diu, Dadra and Nagar Haveli, Laccadive & Minicoy Islands and Meghalaya.

### The Road Transport Corporation Act

The Road Transport Corporation Act, 1950 was a fillip to the nationalisation of road transport. This Act provides for the formation of statutory corporations with a financial participation of Central Government, the State Governments and the public. The State Governments have roughly provided about 55% of the capital of these corporations and the Central Government and others.

So far upto 1969-70 Andhra Pradesh, Bihar, Gujarat, Kerala, Madhya Pradesh, Maharashtra, Mysore, Punjab (erstwhile PEPSU), Rajasthan, West Bengal and Himachal Pradesh (Mandi-Kulu) have such corporations.

The coverage of nationalisation has so far been fairly wide in Maharashtra, Gujarat, Delhi, Chandigarh, Himachal Pradesh, Manipur and Andaman and Nicobar Islands.

The overall coverage of nationalisation of passenger buses is of the order of 39 per cent considering the number of vehicles in this sector.

### Road Transport Financing

With the growth of motor transport in the country, the operators in both the public and private sectors have experienced increasing need for organised finance. Further the operators in the private sector being mostly small-scale operators, the question of viable units was examined. In this connection the conclusion and recommendations of the Study Group on Road Transport Financing and the Study Group on Viable Units may be seen at Annexures VII and VIII.

TABLE No. 9(1)

# NATIONALISATION OF PASSENGER AND GOODS VEHICLES in India (1958-59 to 1971-72)

Year (As on 31st March)	Total No. of buses in India	No. of buses under the public sector undertakings	% of Nationalisation of passenger transport	No. of lorries in India	No. of lorries under the Public sector undertakings	% of Nationalisation of goods transport
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1959.	40,026	14,060	29.3	1,47,625	1,160	0.79
1960.	53,574	16,093	33.0	1,56,671	1,062	0.68
1961.	56,792	17,962	31.6	1,67,649	1,101	0.66
1962.	59,560	20,344	32.4	1,69,096	1,100	0.65
1963.	62,560	22,048	35.2	2,15,408	1,108	0.55
1964.	66,513	23,583	35.5	2,24,181	1,412	0.63
1965.	70,470	24,784	35.2	2,41,040	1,560	0.65
1966.	73,175	26,495	36.2	258,977	1,761	0.68
1967.	76,033	28,592	37.6	2,66,190	1,947	0.73
1968.	82,729	30,760	37.1	2,84,636	2,256	0.79
1969.	87,436	32,927	37.7	3,03,524	2,286	0.77
1970.	91,582	35,189	38.4	3,22,202	2,961@	0.90
1971.	93,907+	37,073@	39.5	3,42,577	2,935	0.86
72.	99,394+	40,596@	40.8	3,63,829	2,552	0.70

+ Figures are provisional.

@ Source—State Transport News.

TABLE No. 9(2)

**NATIONALISATION OF PASSENGER VEHICLES (STATE-WISE)**  
(1971-72)

State	Total No. of buses	No. in Nationalised Undertak- ings@@	% in Public Sector
(1)	(2)	(3)	(4)
Andhra Pradesh . . . . .	(7,100)	2,635	37.1
Assam . . . . .	(2,700)	487	18.0
Bihar . . . . .	(4,600)	1,435	31.2
Gujarat . . . . .	6,362	4,987	78.4
Kerala . . . . .	6,840	1,695	24.8
Madhya Pradesh . . . . .	(5,225)	1,977	37.8
Maharashtra . . . . .	10,234	8,251	80.6
Mysore . . . . .	7,331	3,272	44.6
Tamil Nadu . . . . .	10,820	2,891	26.8
Nagaland . . . . .	140	122	87.1
Orissa . . . . .	2,181*	728	33.4
Punjab . . . . .	(2,780)	1,866	67.1
Rajasthan . . . . .	(7,900)	724	9.2
Uttar Pradesh . . . . .	(8,150)	4,288	52.6
West Bengal . . . . .	(9,060)	1,469	16.2
Himachal Pradesh . . . . .	816	618	75.7
A. & N. Islands . . . . .	31	25	83.4
Delhi . . . . .	3,326	1,338	40.2
Goa, Daman & Diu . . . . .	(872)	—	—
Chandigarh . . . . .	(200)	53	26.5
Pondicherry . . . . .	(103)	—	—
Manipur . . . . .	242	73	30.2
Tripura . . . . .	269	—	—

\*As on 31-12-1971.

@@State Transport News, July, 1973.

Figures in brackets are estimated figures.



TABLE No. 2(3)

## DISTRIBUTION OF UNDERTAKINGS BY TYPE OF SERVICES OFFERED

Goods Service	Passenger City Service	Passenger District Service	Passenger City cum-District Service	Passenger-cum-goods Service (including Hill Passenger Service)
(1)	(2)	(3)	(4)	(5)
1. CRTC, Calcutta	1. TSTD, Madras	1. CSRTC, Ahmedabad	1. APSRTC, Hyderabad	1. AMSRTC, Gauhati
	2. AMTS, Ahmedabad	2. BSRTC, Patna	2. KSRTC, Tiruvandrum	2. UPSRTC, Lucknow
	3. BESTU, Bombay	3. MysRTC, Bangalore	3. MysRTC, Bangalore	3. J&KGTU, Srinagar
	4. DTG, Delhi	4. MSRTC, Bombay		4. MKRTC, Mandi
	5. GTU, Chandigarh	5. PGTS, Chandigarh		5. MSTP, Imphal
	6. CSTC, Calcutta	6. PRTC, Patiala		6. IIGT, Simla
	7. PMTS, Poona	7. RSRTC, Jaipur		7. NBSTC, Cochin
				8. Behar

TABLE No. 9(3)—Contd.

(1)	(2)	(3)	(4)	(5)
		8. STSO, Cuttack		
		9. HGTS, Chandigarh		
		10. ORTC, Berrampur		
		11. STS, A & N Islands		

\*\* Operates Passenger Mail Services only.

\* Operates Passenger Mail and Plain Service.

TABLE No. 9(4)

TOTAL OPERATIONS OF PUBLIC SECTOR ROAD TRANSPORT UNDERTAKINGS  
(1960-61 to 1971-72)

Units		1960-61	1965-66	1968-69	1969-70	1970-71	1971-72
Items	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1)							
1. (a) No. of Undertakings .	No.	29	30	33	33	33	34
(b) No. Reporting .	No.	29	26	29	29	29	29
2. Capital employed .	Rs. in crores	—	248	244	277	296	2246
3. Capital expenditure .	"	—	34	31	38	33	48
4. Employment .	'000 Nos.	141	232	273	304	277	294
Traffic .	"	191	149	180	200	171	180
Maintenance & Repairs .	"	35	54	66	72	74	72
5. Fleet Strength .	"	18.9	28.5	35.5	38.4	38.7	41.3
Buses .	"	17.6	26.5	32.9	35.2	35.4	38.0
Trucks .	"	1.1	1.8	2.2	3.0	3.0	3.0
Taxis .	"	0.2	0.2	0.3	0.3	0.3	0.3
6. Diesel .	1,000 K/ Litres	—	—	523	524	565	592
7. (a) Gross Revenue .	Rs. in crores	74.3	151.2	232.7	254.81	277.40	300.97
(b) Operating costs (including interest on capital).	"	65.9	144.8	227.4	254.97	282.44	309.17

TABLE No 9(4)—Cont'd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(c) Operating costs (excluding interest on capital),	"	62.7	138.6	218.2	244.83	270.70	291.82
(d) Net Revenue—II [7(a)—7(b)]	"	8.1	6.4	5.3	-0.16	-5.04	-8.20
As % of capital employed .	%	—	4.3	2.2	-0.58	-1.70	-3.66
(e) Net Revenue—II [7(a)—7(c)]	Rs. in crores	11.6	12.6	14.5	9.95	6.7	6.15
As % of capital employed .	%	—	8.5	5.9	3.6	2.26	2.75
8. Contribution to National Income	Rs. in crores	41.3	78.3	127.8	137.8	146.8	160.5
As % of capital employed .	%	—	52.9	52.4	49.6	49.6	71.3
9. Value of Bus Traffic :							
(i) Passengers carried .	Crores	206.0	356.9	462.5	475.0	500.69	533.4
(ii) Passenger-kms .	" " Abja	26.2	45.2	58.7	60.4	80.67	90.21
10. Total vehicle-kms. run ;							
(i) Bus-kms (paid)	Million	838.13	1438.20	1902.61	2009.14	2136.30	2257.90
(ii) Truck-kms. (paid)	" "	17.50	40.37	41.00	46.05	45.09	40.70
(iii) Taxi-kms (paid)	" "	1.80	2.43	2.95	2.98	3.55	2.70
11. Accident/Million bus-kms .	Not.	21.2	17.7	15.5	13.9	13.3	13.1
12. Average Revenue/Vehicle-km. .	Paise	84.5	105.1	120.1	121.8	124.4	128.5

£ Capital employed in 1971-72 represents gross fixed assets excluding capital works in progress minus cumulative depreciation plus or minus working capital i.e. the difference between current assets loans and advances including investments and current liabilities and provisions in earlier years, however, it represented capital investment by sources minus depreciation each year only

TABLE No. 9(5)

# **TOTAL COSTS OF OPERATION ON PUBLIC SECTOR ROAD TRANSPORT UNDERTAKINGS** (1960-61 to 1971-72)

(Rs. in lakhs)

Items	1960-61	1965-66	1967-68	1968-69	1969-70	1970-71	1971-72
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>1. Cost of Personnel employed .</b>	1,780	3,793	3,308	6,150	7,189	7,808	8,571
(i) Acquisition . . . . .	223	127	610	681	790	1,000	1,194
(ii) Travelling . . . . .	1,157	2,312	3,501	4,193	4,813	5,113	5,524
(iii) Maintenance & repairs . . . . .	400	826	1,109	1,376	1,556	1,695	1,853
<b>2. Cost of materials consumed</b>	2,319	5,157	7,234	8,057	9,172	10,201	11,092
(i) Fuel . . . . .	1,154	2,837	3,582	4,035	4,380	4,702	5,096
(ii) Lubricants . . . . .	103	211	326	381	374	429	478
(iii) Tyres & Tubes . . . . .	131	956	1,532	1,829	2,085	2,308	2,422
(iv) Batteries . . . . .	28	55	90	91	86	102	109
(v) Stores, spares & other consumables . . . . .	571	1,178	1,541	1,647	2,176	2,579	2,889
(vi) Tickets & ticket equipment . . . . .	26	—	63	71	71	81	—
<b>3. Depreciation on assets</b>	978	1,822	2,194	2,430	2,577	2,865	2,950
(i) Vehicles . . . . .	927	1,694	2,038	2,267	2,276	—	—

TABLE No. 9(5)—Contd.—

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(ii) Other assets	51	128	156	163	301	.	...
4. Overhead costs	1,198	2,776	4,246	5,079	5,546	6,196	6,858
(i) Rents, rates, insurance & taxes	679	1,859	2,813	3,435	3,950	4,288	4,772
(ii) Wear & Superannuation	111	314	493	558	674	765	893
(iii) General contingencies	103	242	283	287	369	322	317
(iv) Miscellaneous	305	369	627	799	533	821	886
5. Interest on borrowed capital	313	623	834	924	1,013	1,174	1,436
Total costs	6,588	14,475	19,816	22,740	24,497	28,244	30,917

TABLE No. 9(6)

# TOTAL COSTS OF OPERATION PER PAID-KILOMETRE (1960-61 to 1971-72)

(In paise)

Items	1960- 61	1965- 66	1967- 68	1968- 69	1969- 70	1970- 71	1971- 72
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>1. Personnel :</b>							
(i) Administration . . . . .	2.55	2.97	3.55	3.52	3.81	4.58	5.19
(ii) Traffic . . . . .	13.25	17.68	20.10	21.64	23.54	23.44	24.00
(iii) Maintenance & Repairs . . . . .	1.58	5.75	6.83	7.18	7.56	7.77	8.05
<b>2. Materials</b>							
(i) Fuel . . . . .	13.21	19.83	20.56	28.83	21.29	21.55	22.14
(ii) Lubricants . . . . .	1.17	1.17	1.87	1.96	1.82	1.97	2.08
(iii) Tyres & Tubes . . . . .	4.98	6.65	9.37	9.44	18.13	10.58	10.52
(iv) Batteries . . . . .	0.32	0.38	0.52	0.17	0.42	0.47	0.17
(v) Stores, spares & other consumables . . . . .	6.58	9.58	8.83	8.50	10.58	11.82	12.55
(vi) Fickets & Ticket equipments . . . . .	0.30	0.35	0.36	0.38	0.34	0.37	0.43
<b>3. Depreciation . . . . .</b>	<b>11.21</b>	<b>12.67</b>	<b>12.60</b>	<b>12.54</b>	<b>12.52</b>	<b>13.14</b>	<b>12.82</b>

TABLE No. 5(10) - Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Overhead costs</b>	7.78	12.93	16.32	17.73	19.19	19.66	20.74
(i) Rent, rates, taxes & insurance	1.27	2.18	2.83	2.88	3.28	3.51	3.88
(ii) Welfare & superannuation	1.18	1.68	1.63	1.48	1.79	1.48	1.38
(iii) General contingencies	3.49	2.53	3.00	4.12	2.69	3.76	3.85
(iv) Miscellaneous	3.59	4.34	4.78	4.77	4.93	5.38	6.25
Interest on capital	.	.	.	.	.	.	.
<b>Total costs per km.</b>	<b>77.47</b>	<b>100.69</b>	<b>113.77</b>	<b>117.36</b>	<b>123.92</b>	<b>129.48</b>	<b>134.35</b>



TABLE No. 9(7)

## GROWTH OF PUBLIC SECTOR BUS TRANSPORT

(1960-61 to 1971-72)

Items	Unit	1930-51	1953-56	1956-67	1968-69	1969-70	1970-71	1971-72
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. (a) Existing under-takings.	No.	28	29	32	32	32	32	32
(b) Reporting under-takings.	No.	26	25	28	28	28	28	28
2. Bus routes (operated).	'000	—	12.5	13.7	17.6	19.5	21.75	23.59
3. (a) Buses owned	"	17.6	26.5	28.6	32.9	35.1	36.3	38.0
(b) Buses operated	"	12.7	19.8	21.3	25.2	26.7	27.8	28.6
(c) Fleet utilisation	%	72.2	74.7	74.5	76.7	76.1	76.5	75.3
4. (a) Bus kms. run (Total)	Crores	89.4	147.8	160.5	196.9	204.2	217.3	229.6
(b) Bus kms. run (paid)	"	85.8	143.8	156.3	190.3	200.9	213.6	224.2
5. (a) Kms./Bus(O)/Total '000		50.7	55.8	57.2	61.3	76.5	78.2	80.3
(b) Kms./Bus (O)/paid '000		49.7	55.3	55.7	59.3	75.2	76.9	78.4
6. (a) Seat capacity/Bus (Pay Load)	No.	—	51.0	50.0	51.0	51.0	56.0	57.0

TABLE No. 9(7)—Contd

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(b) Seat kms/Bus (O)	Lakhs	"	38.1	37.7	39.8	38.8	43.8	41.4
(c) Total seat kms. offered.	Gores	"	7538	8025	10042	10363	12139	12708
7. (a) Passenger carried	Gores	206 0	356.9	389.2	462.5	475.0	500.69	533.45
(b) Passengers/Bus (O)	'000	"	180.3	182.7	183.5	177.9	180.2	180.7
8. (a) Passenger kms. performed.*	Abja	26.2*	45.2	49.4	58.7	60.4	80.67	90.21
(b) Passenger kms/seat Km. offered (lead factor)	%	—	60	62	58	58	66	71
9. Km./Passengers (lead factor)		12.7**	12.7**	12.7**	12.7**	12.7**	16.1	16.9
10. Quality of performance and punctuality.								
(1) Break-down/Million No. bus kms.	No.	205	189	177	188	213	227	239
(2) Accidents/Million bus kms.	No.	24	13	17	16	14	13	14

\* Estimated.

\*\* Assumed.

(O) Starts for operated.

TABLE No. 9(8)  
OPERATIONS OF PUBLIC SECTOR BUS TRANSPORT BY PURE AND COMPOSITE  
SERVICE UNDERTAKINGS IN URBAN AND RURAL AREAS (1971-72)

Items	Units	City Services	District Services	City-cum District services	Total Passenger Services	Passen- ger-cum Goods Under- takings	All Under- takings
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. (a) No. of undertakings	No.	10	12	3	25	7	32
(b) No. of reporting undertakings.	No.	7	11	3	21	7	28
2. Bus Routes operated . '000		1.35	15.31	1.93	21.79	1.80	23.59
3. (a) Buses owned . '000		6.67	18.33	7.66	32.68	3.31	37.99
(b) Buses rented . '000		5.06	13.92	5.87	24.85	3.75	28.60
(c) Fleet utilization . %		75.96	75.82	76.71	76.05	70.53	75.28
4. (a) Total bus kms. . Gross		39.06	111.97	51.91	202.94	26.62	229.56
(b) Paid bus kms. . "		38.33	110.11	50.80	199.64	24.71	224.25
5. (a) Total kms. per bus(a)'000		77.1	80.5	88.4	81.7	71.0	80.5
(b) Paid kms per bus (b)'000		73.7	79.3	86.5	80.3	65.9	78.1

TABLE No. 9 (U) - contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
6. (a) Carrying capacity per bus (pay load)	No.	67	58	52	58	46	57
(b) Seat kms. per bus (O)	Lakhs	49.8	45.8	44.3	46.3	32.3	44.4
(c) Total seat kms. offered	Crores	2514	6378	2600	11499	12.09	12708
7. (a) Passengers carried	"	223.90	175.26	103.98	503.14	30.31	533.45
(b) Passenger per bus (O)	'000	442.1	125.9	177.0	202.4	80.9	186.7
8. (a) Passenger-kms. per. Abja formed.		13.89	47.98	19.46	81.33	8.88	90.21
(b) Passenger-kms/seat kms. (O) (Load Factor.)	%	55	75	75	71	73	71
9. Average kms. travelled per passenger (Load Factor)	No.	6.22	27.38	18.72	16.16	29.30	16.91
10. (a) Break-down/million bus kms.	No.	906	72	156	254	124	239
(b) Accidents/million bus kms.	No.	46	5	12	15	9	14

TABLE No. 9(9)  
COST OF OPERATION OF PUBLIC SECTOR BUS TRANSPORT (1971-72)

Item	Units	City Service Under- takings	District Service Under- takings	City-cum- District Service Under- takings	Total passen- ger service under- takings	Passen- ger cum- goods Service under- takings	All Under- taking
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. (a) Labour Costs	M. Rs.	229.9	339.9	176.3	746.1	108.6	854.7
(b) Labour Costs/bus km.	Paise	50.9	30.4	34.0	36.8	35.9	36.7
(c) % Distribution :							
(i) Administration	%	12.1	16.6	10.7	13.8	14.2	13.9
(ii) Traffic	%	65.6	62.9	68.6	65.1	61.6	64.6
(iii) Maintenance & Repairs	%	22.3	20.5	20.7	21.1	24.2	21.5
(a) Material costs	M. Rs.	192.2	536.7	243.6	972.5	132.7	1105.2
(b) Material costs/ bus km.	Paise.	49.2	47.9	46.9	47.9	44.0	40.7
(c) % of Distribution							
(i) Fuel & Lubricants	%	54.7	47.1	51.1	50.0	52.0	50.2
(ii) Tyres & Tubes	%	15.0	24.4	21.1	21.9	1.3	21.8
(iii) Stores & spare parts.	%	27.7	25.7	26.1	26.2	24.8	26.0
(iv) Batteries	%	0.7	1.0	1.0	0.9	1.3	1.0
(v) Others	%	1.1	1.0	0.7	1.0	0.6	1.0

TABLE No. 9 (9)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
3. (a)	Interest on capital M Rs.	51.6	48.3	26.4	126.3	15.6	142.9
(b)	Interest/Bus km. . . . . Paise	13.2	4.3	5.1	6.2	5.5	6.1
4. (a)	Depreciation cost M Rs.	40.3	149.6	64.2	254.1	39.7	293.8
(b)	Depreciation/Bus km. . . . . Paise	10.3	13.4	12.4	12.5	13.1	12.6
5. (a)	All other costs M Rs.	106.7	385.9	156.1	643.7	37.0	685.7
(b)	All other cost/bus km. . . . . Paise	27.3	34.5	30.1	32.0	12.2	29.4
6. (a)	Total costs M Rs.	620.8	1460.4	665.6	2747.8	334.6	3082.4
(b)	Total cost/bus km. . . . . Paise	152.9	130.5	130.5	135.4	110.7	132.2
7. (a)	Total earnings M Rs.	509.3	1490.9	558.1	2658.3	334.9	3003.2
(b)	Traffic earnings M Rs.	485.9	1438.2	645.7	2569.8	324.7	2894.5
(c)	Traffic earnings bus km. . . . . Paise	125.3	128.4	124.4	126.6	107.4	124.1
8. (a)	Total profit M Rs.	(-)111.5	30.5	.5	(-) 79.5	0.4	(-)79.5
(b)	Profit/Bus Km. . . . . Paise	(-)28.5	2.7	0.3	(-)3.9	0.1	(-)3.4

TABLE No. 9 (10)  
CAPITAL EMPLOYED EMPLOYMENT AND DIESEL CONSUMPTION IN PUBLIC  
SECTOR BUS TRANSPORT (1971-72)

Items	Unit	City Service Under-takings	District Service Under-takings	City-cum-District Service Under-takings	Total passenger under-takings	Passenger goods under-takings	All Under-takings
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. No. of Recorting Undertakings.	No.	11	3	21	7	23	
2. (a) Capital employed	M. Rs.	426.4	1012.4	431.7	1870.5	365.6	2236.1
(b) Capital employed per undertaking.	M. Rs.	60.9	92.0	148.9	89.1	52.2	79.9
(c) Capital employed per vehicle operated.	000 Rs.	84.2	72.8	73.5	75.3	75.0	74.9
3. (a) Capital expenditure during the year.	M. Rs.	62.9	303.5	74.2	440.6	40.6	481.2
(b) Capital expenditure per undertaking.	M. Rs.	9.0	27.6	27.7	21.0	5.8	17.2
(c) Capital expenditure per vehicle operated.	000 Rs.	12.4	21.8	9.2	17.7	8.3	16.2

TABLE No. 9 (10)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
4. (a) Employment (Total) '000		66.9	118.0	62.3	248.1	44.8	292.2
(b) Employment per '000 undertaking		9.6	10.7	21.1	11.9	6.4	10
(c) Employment per No. vehicle operated		13	8	11	10	9	10
5. (a) Estimated Diesel consumption, '000 K.L.		117	279	180	327	66	592
(b) Diesel per veh. operated '000 litre		23	20	22	21	13	20
(c) Diesel per vehicle Kms. Litre		29.9	24.9	25.2	25.9	21.7	25.4

\$Capital employed in 1971-72 represents gross fixed assets excluding capital works in progress minus cumulative depreciation plus or minus working capital i.e. the difference between current assets and advances including investments and current liabilities and provisions. In earlier years however it represented capital investment by sources minus depreciation each year only.



TABLE No. 9-(11)

## REVENUE AND EXPENDITURE OF INDIVIDUAL SECTOR ROAD TRANSPORT

(Rs. in lakhs)

## UNDER TAKING (1971-72)

Type of Service Undertaking	Total Revenue	Total current expenditure	Interest on capital and borrowings	Net Revenue (including interest on capital)	Capital employed	Turn over Ratio total/Revenue	Operational Ratio Current Expenditure/Revenue	Return on capital Net Revenue
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>A. City Service</b>								
AMIS, Ahmedabad	174.59	107.03	40.31	47.92	305.95	1.22	1.09	0.16
DEPTU, Bombay	132.60	175.78	40.26	178.49	1076.86	1.56	1.04	0.17
PATB, Patna	141.91	238.41	21.66	41.80	292.04	0.83	1.07	0.14
DTA, Delhi	519.38	1062.78	201.77	(-)156.63	522.87	1.34	1.52	(-)0.30
CTU, Chandigarh	43.92	43.29	2.21	11.74	37.00	1.32	0.88	0.32
TSTD, Madras	163.83	1709.69	104.23	517.87	1667.16	1.00	1.03	0.32
CSTC, Calcutta	317.65	970.00	105.36	(-)332.03	362.27	1.07	2.51	(-)0.92

TABLE No. 2(11)—Contd

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>B. District Services</i>								
BSRTC, Patna	733 44	346.91	57.00	240.64	887.21††	0.89	1.07	0.27
GSRTC, Ahmedabad	155 02	3977.93	121.49	1689 47	2768.75	1.50	0.96	0.61
MSRTC, Baital	1231.53	1401.28	71.05	336.29	983.52	1.30	1.09	0.344
MSRTC, Bombay	5917.24	6038.81	102.58	1929.21	3244.04	1.82	1.02	0.59
RSRTC, Jaipur	290.33	284.43	20.43	79.44	331.63	0.88	0.98	0.24
PRTC, Patiala	228.15	201.30	19.31	80.04	262.29	0.87	0.88	0.31
HCTS, Chandigarh	1102 38	869.47	50.04	450 05	703.79	1.57	0.79	0 64
STSO, Guwahati	313.80	305.76	19 46	103.03	319.39	0.97	0.97	0.34
FGTS, Chandigarh	615 20	320.72	20.94	212.28	571.52	1.11	0.82	0.37
ORTC, Barampore	180 86	147.14	—	68.43	104.81	1.73	0.81	0 6
STS, A & N Islands	8.59	8 57	0 30	2 66	6.56††	1.31	1.00	0 41

TABLE No. 9 (11)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>C. Civils-Gen-District Services</b>								
APSRTO, Hyderabad	2671.86	2671.86	67.67	798.60	1163.01	2.27	1.01	0.69
KSRTC, Tiruvandrum	1303.73	1484.96	74.33	225.82	936.12	1.48	1.07	0.24
MSRTC Bangalore	2035.93	2308.79	122.62	846.56	2217.73	1.20	0.94	0.38
<b>D. Government Passenger Transport</b>								
AGMSRTC, Guwahati	263.29	370.53	23.28	(—)19.67	411.36††	0.64	1.41(—)	0.05
J&KSTU, Srinagar	400.08	397.40	12.05	93.61	290.50††	1.38	0.99	0.32
HGT, Simla	248.48	305.17	13.72	0.76	316.46	0.79	1.23	0.002
MSRTC, Mandi	98.77	114.11	9.22	15.23	54.70	1.80	1.15	0.28
MSD, Imphal	41.03	53.44	3.00	0.11	153.13	0.27	1.28	0.001
MSD, Cooch Behar	176.66	211.79	10.00	(—)4.98	182.01	0.97	1.20(—)	0.03
UPSRTO, Lucknow	2119.56	1893.03	93.00	654.21	2249.99	0.94	0.89	0.29

Table No. 9 (11)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>E. Goods Transport</i>								
CRTU, Calcutta	61.21	93.63	5.81	(—)6.55	83.57	0.77	1.46	(—)0.08

\* Relates to the year 1969-70.

\*\* Relates to the year 1970-71.

††—Capital Invested (1970-71).

‡Capital Investment.

\$Capital Employed in 1971-72 represents gross fixed assets excluding capital works in progress minus cumulative depreciation plus or minus working capital i.e., the difference between current assets, loans and Capital investment by sources minus depreciation each year only.

TABLE NO. 9 (12)

**CONSTRUCTION OF INDIVIDUAL PUBLIC SECTOR ROAD  
TRANSPORT UNDERTAKINGS TO NATIONAL INCOME**  
(1971-72)

(In '000 Rs.)

Type of Service/Undertaking	Total Expendi- ture on personnel	Current Expendi- ture @	Net Profit \$	Total contribu- tion
(1)	(2)	(3)	(4)	(5)

**A. PASSENGER TRANSPORT****1. City Services**

TST, Madras**	45,674	41,692	{—}5,006	82,280
CSTC, Calcutta . .	41,417	23,760	{—}58,415	6,762
AMTS, Ahmedabad . .	18,261	6,928	{—}3,249	21,940
BESTU, Bombay . .	85,187	32,006	{—}7,318	109,935
PMTS, Poona . .	10,402	4,957	{—}1,650	13,709
DTC, Delhi . .	48,498	27,424	36,340	39,582
CTU, Chandigarh . .	1,557	412	563	32,522

**2. District Services**

BSRTC, Patna . .	26,189	21,725	5,347	42,567
GSRTC, Ahmedabad . .	106,171	122,788	17,809	246,760
MPSRTC, Bairagarh . .	33,423	36,104	11,975	57,552
MSRTC, Bombay . .	152,851	173,030	1,257	313,624
PRTC, Patiala** . .	5,145	4,247	2,686	12,078
HGTS, Chandigarh . .	23,220	14,525	23,291	61,036
STSO, Cuttack . .	7,655	6,825	804	15,284
PCTS, Chandigarh** . .	15,298	4,865	11,548	31,711

TABLE No. 9 (12)—Contd.

(1)	(2)	(3)	(4)	(5)
RSRTC, Jaipur . .	7,686	4,949	590	13,225
SFS, A. & N Islands† .	179	84	2	265
ORTC, Berhampur . .	4,597	2,494	3,372	10,463
<i>3. City and District Services</i>				
APSRTC, Hyderabad .	72,410	68,699	(—)2,975	138,134
KSRTC, Trivandrum .	54,301	31,683	10,223	75,761
My SRTC, Bangalore .	68,011	63,698	14,686	164,425
<b>B. PASSENGER-CUM-GOODS TRANSPORT</b>				
NBSTC Cooch,-Behar***	9,059	2,013	(—)3,513	7,559
MKRTC, Mandi . .	3,466	2,131	(—)1,534	4,063
A&MSRTC, Gauhati**	11,918	4,838	(—)10,726	6,030
UPSRTC, Lucknow** .	71,015	23,504	22,653	117,172
HGT, Simla*** . .	8,527	3,954	(—)5,669	6,812
MSFD, Imphal*** . .	2,085	673	(—)1,161	1,597
J & KGTU, Srinagar** .	9,661	9,336	348	19,365
<b>C. GOODS TRANSPORT</b>				
CRTC, Calcutta . . .	2,592	1,586	(—)2,942	1,236

\*\*Relates to the year 1969-70.

\*\*\*Relates to the year 1970-71.

†Relates to the year 1968-69.

\$Net profits-Gross Revenue-Total cost.

\*Expenditure on personnel includes payments made to all classes of employees in the form of wages, salaries, dearness allowances, provident fund contribution, special allowances and for welfare and superannuation benefits.

@Current expenditure includes rents, rates, taxes, insurance-cost of departmental vehicles, general contingencies, miscellaneous expenditure and interest on capital.

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SECTION 10 : INLAND WATER TRANSPORT

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## INLAND WATER TRANSPORT

Inland Waterways are taken to include rivers, canals and lakes as well as harbour waters and creeks. The development of more rapid transport facilities in India reduced the popularity of this mode of transport for long distance traffic. In a number of regions in the country uncatereed by rail-road, the I. W. T. Undertakings are the only means of transportation. Some undertakings carry lighterage work in Calcutta and Bombay harbours. They will assume a greater role in linking the world ports with the interior regions of the country as LASHER ships carry more and more of world trade in future.

The Inland Waterways, excluding the harbour waters and creeks, are at present under the regulation and control of State Governments, none of them declared as a national waterway for development by Central Government. However, besides the undertakings operating in creeks and harbour, which are registered with the Merchant Marine Department of the Central Government, the largest single IWT undertaking, namely the Central Inland Water Transport Corporation is a public sector undertaking under the Central Government.

The organised sector is relatively small in IWT, and undertakings in that sector alone may be said to ply modern vessels—dumb as well as self-driven. The private undertakings in this sector are generally captive undertakings of construction undertakings. Even the IWT organisation in the public sector, viz. CIWTC, is not solely meant for running IWT services, it manages a dock-yard and constructs bus-bodies also.

A Committee under the Chairmanship of Justice Bhagwati was appointed by the Government of India with a view to develop the inland water transport system in the country. It has submitted its report and made number of recommendations for the future development of inland water transport in the country.



## THE I.W.T. DIRECTORATE

The I.W.T. Directorate was set up in March, 1965 by the Government of India in the Ministry of Shipping and Transport. This Directorate is charged with the following functions:

- (a) to study the immediate long-term transport requirements of the country with a view to co-ordinate inland water transport with other mode;
- (b) to study the existing waterways and formulate schemes for improvements;
- (c) to prepare technical reports on design of waterway and connected structures;
- (d) to formulate proposals for extension of navigability of inland waterways for immediate and short term implementation having regard to availability of water under Irrigation and Power multipurpose project (in consultation with the Central Water and Power Commission) — including any special project to be undertaken purely for navigation;
- (e) to investigate and prepare project reports, design and estimates after carrying out necessary structural and hydraulic model tests for the above in consultation and coordination with the State Chief Engineers concerned and the Central Water and Power Commission;
- (f) to study modern development in all aspects such as improved design of craft, navigational aids, terminal facilities and conservancy, necessary research would also be carried out;
- (g) to draw up standards for classification of waterways, size of locks and clearance under bridges etc.;
- (h) to set up suitable training establishments for training of :
  - (1) diesel machines
  - (2) deck and engine room personnel; and
  - (3) conservancy and technical staff to render technical advice to the Central and State Governments on inland water transport matters.

The Directorate is also responsible for ensuring proper coordination with the Central Water and Power Commission and the Army and Naval Headquarters.

TABLE No. 10(1)  
NAVIGABLE WATER-WAYS OF INDIA

(In Kilometres)

State/Union Territory	Rivers	Canals	Total
(1)	(2)	(3)	(4)
Andhra Pradesh	309	1,690	1,999
Assam	1,983	—	1,983
Bihar	937	325	1,262
Goa	317	25	342
Gujarat	286	—	286
Kerala	840	708	1,548
Maharashtra	501	—	501
Mysore	284	160	444
Orissa	761	224	985
Tamil Nadu	—	216	216
Uttar Pradesh	2,268	178	2,441
West Bengal	1,555	702	2,357
<b>TOTAL</b>	<b>10,401</b>	<b>4,303</b>	<b>14,944</b>

Source : Inland Water Transport Directorate, Ministry of Shipping and Transport, Govt. of India.

TABLE No. 10(2)

## NO. AND TYPE OF INLAND WATER VESSELS REGISTERED WITH THE STATE AND CENTRAL AUTHORITIES

State and type of vessels	Number	Engine Power	Cargo carrying capacity (Tonnes)	Passenger Carrying capacity (No.)
(1)	(2)	(3)	(4)	(5)
<b>Andhra Pradesh*</b>				
1. Self-propelled :				
(a) Cargo } .	158	10 to 150 HP	3 to 80	20 to 74
(b) Passenger } .				
2. Tugs & Pushers .	—	—	—	—
3. Non-Self propelled :				
(a) Dumb barges .	30	—	—	—
(b) Dumb tankers .	—	—	—	—
(c) Dumb flats .	—	—	—	—
(d) Boats .	—	—	—	—
4. (a) Country Boats .	—	—	—	—
(b) Others .	—	—	—	—
<b>Assam</b>				
1. Self-propelled :				
(a) Cargo } .	153	60 to 1500 HP	6 to 570	—
(b) Passenger } .				
2. Tugs & Pushers .	1	1500 BHP	12	—
3. Non-self propelled :				
(a) Dumb barges .	—	—	—	—
(b) Dumb tankers .	—	—	—	—
(c) Dumb flats .	—	—	—	—
(d) Boats .	—	—	—	—

\*As on 31-3-1972.

TABLE No. 10(2)—Contd.

(1)	(2)	(3)	(4)	(5)
4. (a) Country Boats } (b) Others }	89	—	162 to 700	—
Bihar				
1. Self-propelled :				
(a) Cargo	—	—	—	—
(b) Passenger	18	...	—	—
2. Tugs & Pushers	4	100 to 300 BHP	—	—
3. Non-self propelled :				
(a) Dumb barges	—	—	—	—
(b) Dumb tankers	—	—	—	—
(c) Dumb flats	—	—	—	—
(d) Boats	—	—	—	—
4. (a) Country Boats	—	—	—	—
(b) Others	8	—	130 each	—
Gujarat				
(a) Country Boats	2,154	...	...	...
Kerala				
1. Self-propelled :				
(a) Cargo	64	21 to 82HP	15 to 80	62 to 158
(d) Passenger				
2. Tugs and pushers	—	—	—	—
3. Non self propelled :				
(a) Dumb barges	—	—	—	—
(b) Dumb tankers	—	—	—	—
(c) Dumb flats	—	—	—	—
(d) Boats	—	—	—	—

TABLE No. 2)—Contd.

(1)	(2)	(3)	(4)	(5)
1. (a) Country Boats } (b) Others . }	..	...	...	...
<b>Maharashtra</b>				
1. Self Propelled:				
(a) Barges . }		...		...
(b) Boats . }	963	...	...	...
(c) Launches . }		...	...	...
(d) Others . }		..	...	..
2. Tugs and pushers		..	..	..
3. Non self Propelled :				
(a) Dumb barges .	58	—	—	—
(b) Dumb tankers	—	—	—	—
(c) Dumb flats .	..	—	—	—
4. Fishing boats .	2,154	...	...	...
<b>Mysore</b>				
1. Self propelled :				
(a) Cargo . .	—	—	—	—
(b) Passenger .	14	21 to 45 HP	—	4½ to 35
2. Tugs and pushers .	—	—	—	—
3. Non-self propelled :				
(a) Dumb barges .	—	—	—	—
(b) Dumb tankers	—	—	—	—
(c) Dumb flats .	—	—	—	—
(d) Others . .	—	—	—	—
4. (a) Country Boats	628	—	3 to 40	—
(b) Others .	—	—	—	—

Table No. 10(2) - *Contd.*

(1)	(2)	(3)	(4)	(5)
<b>Orissa</b>				
1. Self-propelled .	121	10 to 60 HP 5 to 20 HP 50 to 100 HP	10 to 15 — —	20 to 200 — —
(a) Cargo .				
(b) Passenger .				
2. Tugs and pushers .				
3. Non-self propelled:				
(a) Dumb barges .	—	—	—	—
(b) Dumb tankers .	—	—	—	—
(c) Dumb flats .	—	—	—	—
(d) Others .	—	—	—	—
4. (a) Country Boats	310	—	2 to 80	—
(b) Others .	50	—	1 to 2	—
<b>Punjab &amp; Haryana</b>				
1. Self-propelled .				
(a) Cargo .	—	—	—	—
(b) Passenger .	3	—	—	—
2. Tugs and pushers .	—	—	—	—
3. Non-self propelled:				
(a) Dumb barges .	—	—	—	—
(b) Dumb tankers .	—	—	—	—
(c) Dumb flats .	—	—	—	—
(d) Others .	—	—	—	—

TABLE No. 10(2)—*Contd.*

(1)	(2)	(3)	(4)	(5)
4. (a) Country Boats	2	—	—	—
(b) Others	—	—	—	—
<b>Tamil Nadu</b>				
1. Self-propelled :				
(a) Cargo	—	—	—	—
(b) Passenger	—	—	—	—
2. Tugs and pushers	—	—	—	—
3. Non-selfpropelled:				
(a) Dumb barges	—	—	—	—
(b) Dumb tankers	—	—	—	—
(c) Dumb flats	—	—	—	—
(d) Others	—	—	—	—
4. (a) Country Boats } (b) Others	1,106	—	—	—
<b>West Bengal</b>				
Mechanised vessels	631	...	...	...
<b>Gon, Daman &amp; Diu</b>				
1. Selfpropelled:				
(a) Cargo	}	..	...	..
(b) Passenger				
2. Tugs & Pushers	305	.	...	...
<b>Andaman &amp; Nicobar Islands</b>				
1. Self-propelled:				
(a) Cargo	—	—	—	—
(b) Passenger	2	60 & 34 HP	—	2 & 150
2. Tugs & Pushers	—	—	—	—

TABLE No. 16(2)—Contd.

	(1)	(2)	(3)	(4)	(5)
3. Non-Self propelled :					
(a) Dumb barges .	—	—	—	—	—
(b) Dumb tankers	—	—	—	—	—
(c) Dumb flats .	—	—	—	—	—
(d) Others .	—	—	—	—	—
4. (a) Country Boats .					
(b) Others .	—	—	—	—	—
CIWTC (Calcutta)*					
1. Self-propelled :					
(a) Steamers .	20	91-25 to 1600 NHP	171 to 1019	—	—
(b) Launches .	}	5 17 to 28 NHP	12 to 121	—	—
		18 65 to 312 DHP			
2. Tugs and pushers .					
	4	42 to 56 NHP	81 to 140	—	—
	7	312 to 600 DHP			
3. Non-self propelled :					
(a) Dumb barges	49	—	11 to 102**	—	—
(b) Dumb tankers	8	—	203 to 777@	—	—
(c) Dump flats .	74	—	271 to 1002	—	—
(d) Others .	8	—	—	—	—

\* As on 31-3-73.

\*\* Refers to Registered tonnage.

@ Capacity is in terms of thousand litres.



TABLE No. 10(3)

## PASSENGER SERVICES OPERATIONAL DETAILS OF THE UNDERTAKINGS/NAVIGATION COMPANIES—(1972-73)

Undertaking/ Navigation Company	Route Operated	Period in which operated	Route length (in Kms)	No. of trips sche- duled
(1)	(2)	(3)	(4)	(5)
1. CIWTC	1. Calcutta—Bangla Desh	1-4-72 to 31-3-73	896	...
	2. Calcutta—Sagar	Do.	129	...
2. Govt of Goa, Daman & Diu, River Navigation Deptt.	1. Agacaim—Cortalim	do.	...	...
	2. Panaji—Britina	do.	...	52
	3. Panaji—Piedade—Narao	do.	...	25
	4. Panaji—Aldona	do.	...	7
	5. Panaji—Betim—Vereim	do.	...	42
	6. Old Goa—Piedade	do.	...	154
	7. Rabande—Chorao	do.	...	81
	8. Dona Paula—Mormugao	do.	...	42
	9. Glas Dax Cyires—Betim	do.	...	...
	10. Colvale—Macasana	do.	...	420
	11. Siolim—Chopadem	do.	...	102
3. Kerala State Road Transport Corporation, Water Transport Section.	1. Ernakulam—Mattancherry	1-4-70 to 31-3-71	...	27
	2. Mattancherry—Ernakulam	do.	...	34
	3. Ernakulam—Mattancherry (via customs)	do.	...	7
	4. Ernakulam—Mattancherry (via Terminus)	do.	...	5
	5. Mattancherry—Ernakulam (via customs)	do.	...	5
	6. Mattancherry—Ernakulam (via Terminus)	do.	...	3
	7. Mattancherry—Ernakulam (via Customs & Terminus)	do.	...	3
	8. Mattancherry—Terminus	do.	...	3

Table No. 10 (3)—Contd.

(1)	(2)	(3)	(4)	(5)
	9. Terminus—Mattancherry do.	...	...	40
	10. Terminus—Murukkapadam do.	...	...	3
	11. Murakkapadam—Terminus do.	...	...	2
	12. Murakkapadam—High Court.	1-4-70 to 31-3-71	...	36
	13. High Court—Murakku- padam.	do.	...	36
	14. High Court—Balshatty	do.	...	40
	15. Balshatty—High Court	do.	...	40
1. Amarendra Narain Singh, Adampur	1. Barari—Mahadevapur 2. Sultanqanj—Aguni— Mithland. 3. Patna (Bansghat)— Pahelza	1-4-70 to 31-3-71	16 1763 <sup>50</sup> 20 1096 <sup>@</sup> ...	...
2. Shri Krishana Motor Launch Service.	1. Bombay—Elephanta 2. Jaicid—Kurumba 3. Bombay—Mora 4. Bancot—Dargan 5. Bombay—Rewaj 6. Bombay—Dharmtar	do. do. do. do. do. do.	13 26 9 20 19 84	... ... ... ... ... ...

@ As on 31-3-1970.

TABLE No. 10(3)—Contd.

Undertaking/ Navigation Company	Route Operated	No. of trips per- form- ed	No. of passen- gers car- ried (in lakhs)	Total fare (Rs. operat- ed in lakhs)	No. of fleet
(1)	(2)	(6)	(7)	(8)	(9)
1. CIWTC	West Bengal Passenger Ferry—				
	1. Calcutta—Bangla Desh	...	Neg.	0.30	11
	2. Calcutta—Sagar	...	0.02	2.03	...
2. Govt. of Goa, Daman & Diu, River Navigation Deptt.	1. Agacaim—Cortalim	1,100	10.12	...	3
	2. Panaji—Britina	52	1.18	...	2
	3. Panaji—Piedade—Narao	13	0.03	...	2
	4. Panaji—Aldona	7	0.44	...	1
	5. Panaji—Betim—Vetem	42	0.30	...	1
	6. Old Goa—Piedade	154	3.42	...	1
	7. Rabander—Chorao	81	1.44	...	1
	8. Dona Paula—Mormugao	42	1.46	...	1
	9. Gias Dex Gyires—Betim	1,200	32.10	...	2/3
	10. Colvale—Macasana	400	2.26	...	1
	11. Siolim—Chopadem	102	0.15	...	1
3. Kerala State Road Transport Corporation, Water Transport Section, Kerala.	1. Ernakulam—Mattancherry ...	}	64.19	9.39	12
	2. Mattancherry—Ernakulam ...				
	3. Ernakulam—Mattancherry (via customs)				
	4. Ernakulam—Mattancherry (via Terminus)				
	5. Mattancherry—Ernakulam ... (via Customs)				
	6. Mattancherry—Ernakulam ... (via Terminus)				
	7. Mattancherry— (via Customs & Terminus)				
	8. Mattancherry—Terminus ...				

TABLE NO. 10(3)—Contd.

(1)	(2)	(6)	(7)	(8)	(9)
	9. Terminus—Mattancherry ...				
	10. Terminus—Marukkapa- dam. ...				
	11. Murukkupadam—Terminus				
	12. Murukkupadam—High Court. ...				
	13. High Court—Murukku- padam. ...				
	14. High Court—Balghatty ...				
	15. Balghatty—High Court ...				
				84.19	9.39 12
4. Amarendra Narain Singh, Adampur.	1. Barari—Mahadevpur	1,390	1.05	1.07	...
	2. Sultanganj—Aguania— Bhatkhand	...	...	...	...
	3. Patna (Banghat)—Pahelza	988	...	...	...
5. Shri Krishana Motor Launch Service.	1. Bombay—Elephanta	...	0.17	0.60	
	2. Jaigad—Kurdunsa	...	0.33	0.41	
	3. Bombay—Mora	...	1.15	0.99	
	4. Bancot—Dasgaon	...	0.32	0.40	
	5. Bombay—Rewaj	...	1.88	2.45	
	6. Bombay—Dharmtar	...	0.04	0.07	
					12
				3.89	4.92

@ As on 31-3-1970.

\* Figures relate to 1969-70.

TABLE No. 10(4)

**KERALA STATE ROAD TRANSPORT CORPORATION—IN T WING**  
**Carrying capacity of Passenger vessels**  
**( 1965-66 to 1970-71)**

Name of vessel	Carrying capacity at the end of the financial year (in No. of passenger)			
	1965-66	1968-69	1969-70	1970-71
(1)	(2)	(3)	(4)	(5)
Himalaya L . . . .	176	—	—	—
Samuel . . . . .	35	27	27	27
President . . . . .	164	164	164	164
Komala Kumari . . . .	180	180	180	180
Olympia . . . . .	120	126	126	125
Kanya Kumari . . . .	165	165	165	165
Kerala Kumari . . . .	160	160	160	160
Ganga . . . . .	171	171	171	171
Yamuna . . . . .	137	136	136	137
Kalrati . . . . .	132	126	126	132
Lucky (B) . . . . .	126	—	—	—
Tharangini . . . . .	—	128	128	128
Gayathri* . . . . .	—	136	136	136
Jalaja (commissioned on 17-8-69).	—	—	160	160
ALL VESSELS . . . . .	1,566	1,519	1,679	1,685

L Was sold in 1968-69.

B) Was sold in 1967-68.

\*New boat built in 1967-68.

—Administration Report of Kerala State Road Transport Corporation.

TABLE No. 10(5)

**KERALA STATE ROAD TRANSPORT CORPORATION—IWT WING**  
**Passenger traffic and earnings therefrom**  
**(1965-66 to 1970-71)**

Item	Unit	1965-66	1968-69	1969-70	1970-71
(1)	(2)	(3)	(4)	(5)	(6)
No. of passengers carried .	Lakhs	80.73	81.29	83.20	81.19
Passengers revenue . . .	Rs. Lakhs	7.74	9.45	9.30	9.39
Other revenue . . . . .	"	1.04	0.92	0.94	0.13
Total revenue . . . . .	"	8.78	10.37	10.32	9.52
Average revenue per passenger .	Paise	9.5	11.6	11.3	11.3

Source.—Administration Report of Kerala State Road Transport Corporation.

TABLE No. 10 (G)

Cargo Services—Operational Details of the Undertakings/Navigation Companies  
(1972-74)

Undertaking/ Navigation Company	Route Operated	Route length (Kin.)	Nature of Cargo carried	Total cargo moved (tonnes in lakhs)	Total Freight charged (Rs. in lakhs)	Total No. of vessels used	Freight No. of per tonne trips per Km. (In Rs.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ASSAM & WEST BENGAL							
1. CHITTO							
(a) Assam Zone.	1. Joghichopa-Gauhati Bazar.	141	1. Rice 2. Wheat	0.007 0.031	0.16 0.69		0.16 0.16
	2. Gauhati Bazar— Calcutta.	1393	Tea	0.004	0.60		0.11
	3. Joghichopa-Tista- mukhabad (B. Desh).	326	Wheat	0.000	0.28		0.11
	4. Joghichopa-Bahad- urabad Ghat. Bazar	254	Wheat	0.031	1.04	29	0.13
	5. Gauhati-Bazar Ghat Narayanganj (B. Desh).	730	Timber	0.003	0.31		0.14
	6. Dhubri Ghat- Dacca (B. Desh).	1516	Timber	0.015	1.33		0.06

TABLE No. 10 (G)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7. Dhubri	Ghat-	1189	1. Match Box	0.001	0.07	}	0.06	...
Calcutta			2. Jute	0.008	0.79		0.08	...
(b) Calcutta Zono	1. Calcutta-Haldia	103	1. Steel Plates	0.060	1.19	}	0.19	...
			2. Heavies	0.005	0.34		0.56	...
	2. Sagar/Haldia-Calcutta.	108	RapeSeeds/ Fertilisers	0.151	3.59		0.22	...
	3. Calcutta-Rishra .	68	Salt	0.080	0.36		0.07	...
	4. Calcutta-Gauhati Bazar.	1394	Wheat	0.005	0.63		0.09	...
	5. Calcutta-Dacca (B. Desh).	778	Coal	0.301	16.57		0.07	...
	6. Calcutta-Narayan- ganj (B. Desh).	759	General Cargo	0.115	13.81		0.16	...
	7. Narayanganj-Calcutta (B. Desh).	759	Jute	0.033	3.47		0.14	...
	8. Lighterage Traffic at Calcutta Port							
	(a) Calcutta-Calcutta	—	1. Furnace Oil/Diesel	0.143	2.87	}	...	...
		—	2. Fresh Water	0.003	0.01		...	...



TABLE No. 10 (5)—Contd.

1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	(b) KP/KDR Mor- finga-Shalimar	—	1. Machinery 2. Timber 3. General Cargo	0.496 0.092 0.594	2.09 2.62 4.75	...	...	...
			TOTAL.	2.157	57.57			
2. GOA								
(a) M/s. Salgaocar @ Bicholim (Goa) Mining Industries Pvt. Ltd.	Mormugao Harbour	42	Iron Ore	14.45	—	19	—	3397
(b) M/s. V. S. @ Shour Dempo Co. Pvt. Ltd.	Mormugao Harbour	35	Mineral Ore	9.55	—	24	—	3127½
(c) Ms. Chowgule & Co. Pvt. Ltd.	1. Pale-Mormugao 2. Sirigao-Mormugao 3. Nirabag-Mormu- gao 4. Shelvan-Mormu- gao	64 40 64 40	Iron Ore	16.19	—	28	...	4504

TABLE No. 10 (6)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	5. Sonarberg, Mormugao	64						
	6. Suria-Mormugao	56	Iron ore	16.19	—	28	...	4504
	7. Viridi-Mormugao	56						
	8. Sirsaim-Mormugao	56						
	9. Vagus-Mormugao	64						
(d) M/S. Seva Pvt. Ltd.	1. Sirsaim Bunder Mormugao Harbour	40	Iron Ore	5.13	...		...	...
	2. Viridi Bunder do.	41	Iron Ore	1.25	...		...	...
	3. Amono Bunder do.	37	Iron Ore	4.25	...	33	...	...
			Sub-Total	13.63	...		...	...
			Total	14.10	...		...	...
b. Ore exported for Third Particle								
				0.47				
(e) M/s. Mine								
	Shantila Interior Heads Mormugao Harbour	47—58	Iron Ore	2.63	17.08	6	...	787
	Kushaldas & Bros. Pvt. Ltd.							

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(f) M/s. Timblo <sup>2</sup> Usao Sanvor- adem—Mormugao		38	Mineral Ore	3.00	—	10	...	...
Pvt. Ltd.	River Loading	40-56	Mineral Oil	...	12.48	6	...	...
(g) M/s. Handecar* Parkot- Shipping Pvt. Ltd.	points all over Goa—Mormugao Harbour							
(h) M/s. Sharfina Dock & Steel Co. Pvt. Ltd.	Various loading points in river Zuvarland Mandavi-up to ships anchorage in th mild steam.	40	Iron Ore	7.50	51.43	12	0.18	...
3. Gujarat								
(a) Shri Digvijaya <sup>2</sup> Cement Co., Ltd.	1. Sikka Factory— Island. 2. Sikka Factory— Steamer Anchor- age Point.	30	Sea Sand	2.47	1.34	2	...	...
		15	Cement	0.92	3.43	6	...	...
			TOTAL ₹.	3.39	4.97			
(b) M/s. United* Shippers Ltd.	Sikka—Sikka Island	20	Sea Sand	2.24	15.53	10	0.30	...

TABLE No. 10 (6) —Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4. Maharashtra	...	...	1. Ore	3.00	9.30	17	...	...
M/s. Kathi- awan of Malabar & Malabar Constn- gherage Co.	...	...	2. General Cargo	1.00	8.00	...	...	...

\*Relates to as on 31-3-1972.

② These are private firms owning vessels for movement of their own cargo.

TABLE No 10(7)  
CHARTERING, BY CIWTC CALCUTTA  
(1972-73)

Name of vessels chartered	Party to whom chartered	No. of vessels chartered	Monthly charter hire per vessel (In Rs.)	Total charter hire char- gers (In Lacs Rs.)@
(1)	(2)	(3)	(4)	(5)
1. Chartered Ferry (Shalimar—Garden Reach and vice versa).	S E Railway	..	...	4.29
2. Chartered Ferry (Ramakrishnapur—T. T. Sheds and vice versa).	Calcutta Port Commissioners		...	0.68
3. Chartered cruises	.	..	..	0.30
4. Miscellaneous Charter	.		.	0.30
TOTAL	.	.	..	7.60

@ The number of vessels chartered and charter hire not available.

TABLE No. 10(B)

**AVERAGE DAILY EMPLOYMENT AND ANNUAL WAGE BILL  
OF CIWT CORPORATION  
(1968-73)**

Category	Year	Number of workers employed	Average No. of days of employ- ment in a month	Total salaries and wage paid in a year (Rs. in Lakhs)
(1)	(2)	(3)	(4)	(5)
Skilled	1968-69	410	31	0.69
	1969-70	370	31	1.11
	1970-71	363	31	0.69
	1971-72	391	31	0.97
	1972-73	399	31	1.73
Semi-skilled	1968-69	81	31	0.07
	1969-70	166	31	0.21
	1970-71	174	31	0.33
	1971-72	156	31	0.28
	1972-73	179	31	0.59
Unskilled	1968-69	1,463	31	1.10
	1969-70	1,081	31	1.85
	1970-71	1,165	31	2.00
	1971-72	1,111	31	1.69
	1972-73	1,172	31	5.42
TOTAL	1968-69	1,954	31	1.86
	1969-70	1,617	31	3.17
	1970-71	1,702	31	3.02
	1971-72	1,658	31	2.94
	1972-73	1,750	31	7.74

TABLE No. 10(9)

**KERALA STATE ROAD TRANSPORT CORPORATION  
EMPLOYMENT IN I.W.T. PASSENGER TRANSPORT  
(1969-71)**

Category	Permanent staff employed as on 31st March			Temporary staff employed as on 31st March			Total staff employed as on 31st March		
	1969	1970	1971	1969	1970	1971	1969	1970	1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Higher Division Officer . . .		1	1	1		—	1	1	1
Running Staff									
(a) Supervisory	2	2	2	—		—	2	2	2
(b) Non-supervisory.	141	160	160	54	3	34	195	193	194
Mechanical staff									
(a) Supervisory	1	1	1	—		—	1	1	1
(b) Non-supervisory.	41	27	29	8		19	49	46	48
Ministerial Staff									
(a) Supervisory	1	1	—	1	1	2	2	2	2
(b) Non-supervisory.	10	10	10	—	—	—	10	10	10
<b>TOTAL</b>	<b>196</b>	<b>202</b>	<b>203</b>	<b>64</b>	<b>53</b>	<b>55</b>	<b>260</b>	<b>255</b>	<b>258</b>

Source.—Administration Report of Kerala State Road Transport Corporation.

TABLE No. 10(10)  
**INCOME AND EXPENDITURE OF CENTRAL INLAND WATER  
 TRANSPORT CORPORATION CALCUTTA**  
 (1968-69 to 1971-72)

(Rs in Lakhs)

Items	1968-69	1969-70	1970-71	1971-72
(1)	(2)	(3)	(4)	(5)
<b>A. Income</b>				
Calcutta Lighterage, Warehousing service.	26.72	35.36	56.57	67.84
Rajabagan Dockyard	83.69	75.11	103.94	146.44
Kulpi Workshop	11.47	8.92	20.37	26.73
Assam inland river services	0.85	8.28	3.81	7.87
Rent	9.85	10.47	8.83	9.88
Assam Sundarban conservancy grant.	2.06	1.38	1.36	1.24
Subsidy for Assam Loss	39.00	29.39	22.90	22.00
Profit on sale/elimination of Fixed assets.	0.99	6.57	13.20	5.84
Miscellaneous	5.17	9.26	12.29	21.01
<b>TOTAL INCOME</b>	<b>179.80</b>	<b>184.74</b>	<b>243.27</b>	<b>308.82</b>
<b>B. Expenditure</b>				
Salaries, wages, P.F.	134.93	126.73	144.94	184.09
Stores, spare parts	6.20	5.16	6.02	8.84
Power and fuel	13.85	14.00	12.53	11.93
Rent	19.50	9.58	10.23	10.38
Repairs to buildings, dockslipways.	1.76	1.81	2.30	2.30
Repairs to machinery	2.12	3.32	3.60	6.45
Repairs to vessels	17.89	24.67	28.37	31.88
Other repairs	0.65	1.18	1.12	1.17
Insurance	1.50	1.50	1.89	6.39
Rates and Taxes	1.35	1.54	1.63	1.67
Managing Director expenses/ Directors fees.	0.27	0.30	0.28	0.27
Interest	66.72	70.47	81.95	78.48
Depreciation	13.22	12.01	16.02	17.96
Miscellaneous expenses	27.98	29.62	40.95	56.39
<b>TOTAL EXPENDITURE</b>	<b>297.94</b>	<b>301.89</b>	<b>351.83</b>	



TABLE No. 10(11)

## FIXED ASSETS OF CIWTC—CALCUTTA

(as on 31-3-1972)

(Rs. in lakhs)

Particulars	Cost as on 1st April 1971	Addition transfers during the year ended 31-3-72	Sales/eliminations/transfers during the year ended 31-3-72	Total	Depreciation up to 31-3-71	Less adjustment of depreciation on sales eliminations
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Steamers, Launches-flats Barges, pontoons, Bu- oys & Lights.	256.22	1.78	2.34	255.66	34.61	0.20
Land . . . . .	12.44	—	0.10	12.34	—	—
Buildings, Docks, slipways etc. . . . .	21.76	0.42	0.03	22.15	3.69	0.01
Machinery Plant & Tools	43.57	2.40	0.31	45.74	0.59	0.12
Furniture & Fixture . . . . .	2.74	0.40	—	3.14	0.59	—
Motor Vehicles . . . . .	2.10	1.05	Neg.	3.15	0.69	—
Live stock . . . . .	Neg.	—	—	Neg.	—	—
<b>TOTAL . . . . .</b>	<b>338.83</b>	<b>6.13</b>	<b>2.78</b>	<b>342.18</b>	<b>48.57</b>	<b>0.33</b>

## Explanations :—

Col. 5 = Col.(2) + Col.(3) — Col.(4)

Col. 9 = Col.(6) — Col.(7) + Col.(8)

Col. 10 = Col.(5) — Col.(9)

TABLE No 10 (11)—Contd.

Particulars	Deprecia- tion charged for the Year ended 31-3-72	Deprecia- tion upto 31-3-72	Net Value as on 31-3-72	Net Value as on 31-3-71
(1)	(8)	(9)	(10)	(11)
Steamers, Launches, Flats, Barges, Pontoons, Buoys & Lights	12.40	46.81	208.85	221.62
Land . . . . .	—	—	12.34	12.44
Buildings, Docks, Slipways etc.,	1.09	4.78	17.37	18.07
Machinery Plant and tools .	3.82	12.29	33.45	34.97
Furniture and fixtures . .	0.31	1.29	1.85	1.76
Motor Vehicles . . . .	0.34	1.03	2.12	1.41
Livestock . . . . .	—	—	Neg.	Neg.
TOTAL . . . . .	17.96	66.20	275.98	290.27

Source : Central Inland Water Transport Corporation, Calcutta.

TABLE No.10(12)

**INCOME AND EXPENDITURE OF INLAND WATER TRANSPORT  
SECTION KERALA STATE ROAD TRANSPORT CORPORATION  
(1965-66 to 1970-71)**

(Rs. in Lakhs)

Item	1965-66	1968-69	1969-70	1970-71
(1)	(2)	(3)	(4)	(5)
<b>Income :</b>				
<b>I Traffic Revenue</b>				
(i) Revenue from Passengers	7.99	9.47	9.38	9.39
Sub-total (operating revenue)	7.99	9.47	9.38	9.39
<b>II Non-operating revenue :</b>				
(i) Rent etc. . . . .	0.09	0.13	0.09	0.09
(ii) Miscellaneous receipts .	0.71	0.77	0.84	0.04
Sub-total (Non operating revenue).	0.80	0.90	0.93	0.13
<b>TOTAL (I+II) . . . .</b>	<b>8.79</b>	<b>10.37</b>	<b>10.31</b>	<b>9.52</b>
<b>Expenditure</b>				
<b>1. Operating Expenses :</b>				
<b>A. Traffic :</b>				
1. Salaries and allowances	4.02	6.82	7.46	7.29
2. Tickets and traffic stationery.	0.09	0.08	0.15	0.11
3. Uniforms (traffic) . .	—	—	0.05	0.05
4. Other charges . . . .	0.22	0.01	—	0.04
<b>B. Repairs &amp; Maintenance to boats :</b>				
1. Salaries & Allowances (including T.A.) . .	0.42	1.09	1.46	1.27
2. Stores . . . . .	0.23	0.15	0.45	0.90
3. Other charges . . . .	0.08	0.16	0.24	0.21

TABLE No. 10(12)—Contd.

(1)	(2)	(3)	(4)	(5)
C. Power . . . . .	2.27	2.46	2.26	2.18
D. Licence for passenger boats	—	—	—	—
E. Welfare and superannuation . . . . .	0.39	0.62	0.73	0.59
F. General & Administrative Expenses :				
1. Rent, Rates and taxes . . . . .	0.07	0.03	0.10	0.02
2. Insurance . . . . .	—	—	—	—
3. Staff cars and van expenses	—	—	—	—
4. General Charges . . . . .	0.13	0.13	0.14	0.14
5. Repairs & Maintenance to Bldg. . . . .	0.06	0.14	0.13	0.01
6. Other Charges . . . . .	—	0.16	0.04	0.01
G. Depreciation . . . . .	0.47	0.29	0.39	0.35
H. Arrears as per Award Arbitrators . . . . .	—	2.62	—	—
<b>Total (Operating expenses)</b>	<b>8.45</b>	<b>14.77</b>	<b>13.60</b>	<b>13.11</b>
<b>I. Non-Operating expenses :</b>				
A. Debt charges . . . . .	—	—	—	—
B. Other items (bonus) . . . . .	0.40	1.00	0.70	0.99
C. Interest . . . . .	0.45	0.45	0.45	0.45
D. Income tax . . . . .	—	—	—	—
<b>Sub-total (Non-Operating expenses)</b>	<b>0.85</b>	<b>1.45</b>	<b>1.15</b>	<b>1.44</b>
<b>TOTAL (I+II)</b>	<b>9.30</b>	<b>16.22</b>	<b>14.75</b>	<b>14.55</b>

Source : Administration Report of Kerala State Road Transport Corporation.

TABLE No. 10(13)

**KERALA STATE ROAD TRANSPORT CORPORATION—IWT  
WING OPERATIONAL COSTS OF INLAND WATER TRANSPORT  
(1965-66 to 1970-71)**

(Rs. in lakhs)

Item	Expenditure during the year			
	1965-66	1968-69	1969-70	1970-71
(1)	(2)	(3)	(4)	(5)
Cost of personnel . . .	4.57	9.53*	8.92	8.60
Cost of materials . . .	2.57	3.70	2.98	3.33
Taxes, interests & depreciation	1.38	1.39	1.66	1.54
Over-head cost . . .	0.78	1.59	1.18	1.28
<b>TOTAL . . .</b>	<b>9.30</b>	<b>16.21</b>	<b>14.74</b>	<b>14.55</b>

\*Includes arrears in pay and allowances to the extent of Rs. 2.62 lakhs paid to the staff on the basis of the Arbitration Award.

Source : Administration Report of Kerala  
tion.

TABLE No. 10(14)

## NET RETURN OF CAPITAL OUTLAY—INLAND WATER TRANSPORT SECTION (KSRTC)

(1963-64 to 1970-71)

(Rs. in lakhs)

Year	Capital outlay	Revenue	Expenditure	Net income	Net return on capital outlay (percentage)
(1)	(2)	(3)	(4)	(5)	(6)
1963-64	7.01	6.06	7.86	-1.80	-25.7
1964-65	6.95	6.92	9.45	-2.53	-36.3
1965-66	7.16	8.78	9.30	-0.52	-7.2
1966-67	7.16	9.71	10.39	-0.68	-9.5
1967-68	7.16	9.95	13.11	-3.16	-44.2
1968-69	6.52	10.37	16.22	-5.85	-89.2
1969-70	7.91	10.32	14.75	-4.43	-56.0
1970-71	7.91	9.52	14.55	-5.03	-63.6

Source: Administration Report of Kerala State Road Transport.

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## SECTION 11. PORTS

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## SEA—TRANSPORT

### PORTS & LIGHT HOUSES

#### (a) PORT ORGANISATION IN INDIA

Ports as marine stations are meant to provide sea-borne vessels certain basic services such as dock, harbour or berth facilities for the ships, and landing facilities for the passengers and cargo, apart from cranes, warehouses, labour etc. for cargo handling and transport.

2. In India, the ports may be broadly divided into those under the control of the Central Government and those under the control of maritime State Governments. The ports under the control of Central Government are eight in number and are known as the "Major Ports". (Two intermediate ports namely, Mangalore and Tuticorin are also coming up shortly as major ports). The ports under the State Governments/Union Territories are 187 of which 25 are 'Intermediate Ports' and 162 'Minor Ports'.

3. The major ports under the Central Government, are governed by their respective Central Acts. The three older ports of Bombay, Calcutta and Madras are governed by the Bombay Port Trust Act, 1879, Calcutta Port Act 1890, and Madras Port Trust Act, 1905, respectively. The remaining five, viz., Cochin, Visakhapatnam, Mormugao, Kandla and Paradip are governed by the Major Port Trust Act, 1963.

4. The intermediate and minor ports are administered by the maritime State Governments with the help of local advisory bodies and their mode of administration varies. The intermediate ports of Mangalore in Karnataka State and Tuticorin in Tamil Nadu, which are being developed as major ports are administered by the Port Trust Boards. The various other ports under the maritime State Governments are administered by their State Port Officers.

5. As for the major ports, their administration is carried on by the Port Trusts created under the Acts governing them. The pattern of constitution of Major Port Trust is similar. The Chairman of each Major Port Trust is



appointed by Central Government and the Board of Trustees/Commissioners nominated for two years by the Central Government to represent the business, labour, railway and other interests concerned with the Port. Each Major Port Trust is empowered to appoint its own staff cadres to carry out its various activities. Questions relating to administration are decided by a majority of Trustees/Commissioners present. The Major Port Trusts are empowered to receive grants from Government, raise loan in the open market, and fix and charge rates and fees for the services rendered. The Acts governing these Ports do not lay criteria or objectives in regard to the rates charged, cost incurred for the returns to be secured on the capital invested. They are, however, required to receive the prior approval of Central Government for their annual budgets and also submit annual administration reports. Their annual accounts are also subject to audit by the Comptroller and Auditor General of India.

6. The port authorities in India derive their revenue mainly from levy of dues and charges on the ships visiting their ports and the cargo handled in their port-areas. The rates of dues, fees and charges of the ports are not uniform, the costs incurred by the ports being different from one another. The main sources of revenue from ship traffic are: (i) Port dues, (ii) Pilotage, (iii) Berth hire, (iv) Survey and measuring fees and (v) Ship-repairs in dry docks. The main sources of revenue from cargo traffic are :

(i) Wharfage/harbour dues/landing fees, (ii) Crane-hire charges, (iii) Rentals from ware-houses, and (iv) Demurrage charges. Besides, the port authority may also earn an income by providing rail and other transport for the cargo movements in the port-precincts, as well as bunker fuel and water facilities for the visiting ships.

7. Besides administration, accounting and auditing, the main activities of port authorities include (1) hydrographic surveys, dredging, conservancy and maintenance of port approaches, navigable channels and along side berths, (2) lighthouse and light vessels under the port and buoying and lighting of channels, (3) pilotage and towage, mooring and unmooring, berthing and unberthing of visiting ships, (4) handling, ware-housing and transportation of goods in the port area, (5) civil, mechanical and electrical engineering and maintenance of harbour crafts and plants, (6) fire fighting and fumigation, (7) stores (8) watch and ward and management of port properties and

estates, (9) medical, welfare, housing, etc. To carry out these heterogeneous activities, each port authority engages different categories and types of labour. The workers employed by the port authorities are generally known as 'port workers' and they constitute the single largest contingent of labour in each port.

8. Apart from the port authority and its offices, a number of other agencies/ organisations, both private and government, operate in the port area. They include the Dock Labour Board, Stevedore organisation, handling employees licensed measures, clearing and forwarding agents, chipping and paluting employers, owners of barges, lighters and launches, ship owners, shipping agents, tea traders, custom and other government agencies. Generally, the workers employed by agencies other than the Port Trust are known as "Dock Labour who are required to register with the Dock Labour Board located in the port area.

9. The most prominent activity in a port is cargo-handling which absorb most of the labour in the port area. There are essentially two sets of workers engaged in handling the cargo of ships. One set is engaged by the Stevedore to work on board and the ships, while the other set belonging to the port authority handle the cargo from the landing point to the stocking point or *vice-versa*.

10. The wages paid to workers vary from category to category of workers and also from one employing agency to another. The two predominant methods for wage payment are : fixed monthly salary and piece wage rate or hourly wages. Practically all the major ports have evolved schemes for incentive wage rates for different types of work and activities.

11. Rail-transport facilities are provided for cargo movements in the port area of all major ports except Paradip which is connected only by roads. The railway system is owned and operated by the port authorities in the case of Calcutta, Bombay, Madras, Visakhapatnam and Mormugao Ports. In the case of Cochin Port, it is owned by the Port Trust and operated by the Southern Railway. At Kandla Port, the port railway is both owned and operated by the Western Railway authorities.

12. The ships visiting Indian ports are required to pay not only the due fees and charges for the services rendered by the port authority concerned, but also light-dues to the Light-Houses Department of the Central Ministry

of Shipping and Transport. The navigational aids are of 2 categories namely 'general' and 'local'. The provision, superintendence and management of 'general' aid is vested in the Union Government and the 'local' aids are the responsibility of State Governments, Port Trusts etc. but general control over all navigational aids is exercised by the Union Government. This is being done through the Department of Light houses and Light Ships which is a self supporting Department, its revenue being derived from light dues levied on shipping at the current rate of 30 paise per ton for Steamship and 6 paise per ton for sailing vessels.

*Committees appointed on ports* : There have been occasional appointment of Committees which related either to specific ports or to selected issues. Examples of the former category are the reports of Sir Godfrey Armstrong's West Coast Port Development Committee, Desai Committee on service conditions of marine services at the ports initially for Bombay and then for the remaining ports. The Port and Shipping Statistics Committee (1955) and also the report (July, 1958) of the International Association of Ports and Harbours (I.A.P.H.) Team fall under the later category. There have also been a few inquiries, wage structure, categorisation of labour, etc. at the ports undertaken by Committees as P. C. Chaudhuri Committee (1957) and the Central Board for Port and Dock Workers (1969).

In 1968, the Government of India appointed the Commission on Major Ports with the following terms of reference :—

- (i) to examine the method of working of Major Ports with a view to improve their operational efficiency;
- (ii) to consider broadly their development programmes in the context of present and future national needs with special reference to the changing shipping and port technology;
- (iii) to examine specifically the following aspects of port working;
  - (a) Management, (b) Financing and (c) Personnel.
- (iv) to consider in the light of the above, the capacity of the ports to enhance the current rate of ex-gratia payment; and
- (v) to review the arrangements that exist for co-ordination among the different ports; and

(vi) to make recommendations on the above and other ancillary matters.

The Commission submitted its Report in June, 1970.

### DEVELOPMENT OF PORTS IN THE FOURTH PLAN

The total cost of the programme for the development of major ports is about Rs. 280 crores. The Port Trusts are expected to contribute about Rs. 100 crores from their own resources. The more important schemes in progress which are proposed to be completed in the Fourth Plan are the Haldia Dock system and the Mangalore and Tuticorin Port projects. The first phase of development of Tuticorin and Mangalore Ports is expected to be completed by 1972-73. Provision has been made for completion of the dock expansion which were started in the Third Plan. Among the new major schemes, mention may be made of the installation of modern ore handling facilities at Mormugao and Madras harbours, construction of an outer harbour at Vishakhapatnam for handling deep draft ore carriers initially upto 100,000 dwt (dead weight tonnage) and ultimately upto 200,000 dwt., construction of a satellite port for Bombay at Nhava Shiva and an oil terminal at Cochin. It is proposed to set up a Central Dredging Organisation to meet the capital dredging requirements of major and minor ports. Provision is being made for technical investigations relating to problems common to various ports as also for the setting up of a consultancy organisation.

For the development of minor ports a provision of Rs. 35 crores (Rs. 20 crores in the Central Plan) has been made in the Fourth Plan. Provision has been made for a Minor Ports Dredging and Survey Organisation, development of ports facilities in Andaman and Nicobar Islands, Laccadive, Minicoy and Amini Islands and a few other selected ports in State such as Porbander, Mirya Bay, Cuddalore etc.

### (b) DEPARTMENT OF LIGHT HOUSES AND LIGHT SHIPS

The Department of Lighthouses under the Ministry of Shipping and Transport looks after the maintenance and development of navigational aids on the coastline, excepting those maintained by the port and the maritime State Government. The lighthouse Department is a self-financing Department. The light dues charged are 6 paise per NRT for sailing vessels and 50 paise per NRT for steaming vessels that enter the ports of India.

TABLE No. 11(I)

## NAVIGATIONAL AIDS ON THE COAST LINE OF MARITIME STATES. (1972-73)

(In Nos.)

Maritime State/U.T.	Coast-line (in Kms.)	Light Buoys	Decca- navigator chain stations	General Light Houses	Radio Beacons
(1)	(2)	(3)	(4)	(5)	(6)
<b>A—WEST-COAST :</b>					
Gujarat	1,600	19	4	54*	2
Maharashtra	510	1	—	25	2
Goa	—	—	—	2	2
Karnataka	280	—	—	5	1
Kerala	575	—	—	12*	1**
<b>B—EAST-COAST :</b>					
Tamil Nadu	990	2	—	10*	1**
Pondicherry§	58	—	—	3	—
Andhra Pradesh	960	1	—	8*	2@
Orissa	430	—	2	5	1
West Bengal	—	—	2	1	1
<b>C—ISLANDS :</b>					
Lakshadweep Group	—	—	1 re.	8*	1**
Andaman and Nicobar	—	—	—	14*	2**
<b>Total (A+B+C)</b>	<b>5,403</b>	<b>23</b>	<b>8</b>	<b>147</b>	<b>16</b>

\*Include under establishment as indicated : Gujarat-4, Kerala-7, Tamil Nadu-3, A.P.-1, Lakshadweep-1, and A. & N.-8.

\*\*Under establishment/Construction.

§As on 30-6-73.

@One under establishment.

re For available states/Union Territories only.

TABLE NO. 11(1)—Contd

(in Nos.)

Maritime State/U.T.	Fog signals	VHP/RT Sets	Radar	Launches	Light Vessels
(1)	(2)	(3)	(4)	(5)	(6)
<b>A—WEST-COAST :</b>					
Gujarat . . . . .	11	11	—	3	2
Maharashtra . . . . .	1	6	1	4	—
Goa . . . . .	—	—	—	—	—
Karnataka . . . . .	1	3	—	1	—
Kerala . . . . .	—	—	—	—	—
<b>B—EAST-COAST</b>					
Tamil Nadu . . . . .	—	—	—	—	—
Pondicherry S . . . . .	—	—	—	—	—
Andhra Pradesh . . . . .	—	—	—	—	—
Orissa . . . . .	—	3	—	1	—
West Bengal . . . . .	—	3	1	—	—
<b>C—ISLANDS :</b>					
Lakshadweep Group . . . . .	—	—	—	—	—
Andaman and Nicobar . . . . .	—	5	—	1**	—
<b>TOTAL</b> <b>(A+B+C)</b> . . . . .	13	31	2	10	2

\*\*Under establishment/Construction.

NOTE:—For Figures in col. (2), Report of Intermediate and Minor Ports of India (Government of India, 1968), except Pondicherry.

Source : Department of Lighthouses and Lightships, Govt. of India &amp; Pondicherry Territory.

TABLE No. 11(2)

## NO. OF MAJOR, INTERMEDIATE AND MINOR PORTS IN THE MARITIME STATES (1972-73)

Maritime State/U.T.	No. of Major Ports	No. of Intermediate Ports	No. of Minor Ports	Total No. of Ports
(1)	(2)	(3)	(4)	(5)
<b>A—WEST-COAST :</b>				
Gujarat . . . . .	1	11	43	55
Maharashtra . . . . .	1	2	47	50
Goa . . . . .	1	—	6	7
Karnataka . . . . .	—	2*	20	22
Kerala . . . . .	1	3	8	12
<b>B—EAST-COAST :</b>				
Tamil Nadu . . . . .	1	3*	10	14
Pondicherry . . . . .	—	—	2	2
Andhra Pradesh . . . . .	1	2	6	9
Orissa . . . . .	1	—	2	3
West Bengal . . . . .	1	1*	—	2
<b>C—ISLANDS :</b>				
Lakshadweep Group . . . . .	—	—	9	9
Andaman & Nicobar . . . . .	—	1	9	10
<b>Total (A+B+C)</b> . . . . .	<b>8</b>	<b>25</b>	<b>162</b>	<b>195</b>

\*Mangalore Port in Karnataka, Tuticorin Port in Tamil Nadu and Haldia Port in West Bengal are being developed as Government.

TABLE No. 11(3)

DRAFT, MOORING & BERTHING FACILITIES AVAILABLE AT  
MAJOR PORTS (AS ON 31-3-1973)

(In Nos.)

Ports	Existing Draft (Metres)		Moorings	Berths	No of Jetty systems	Bunder Inland Vessels Wharves
	Mini-mum	Maxi-mum				
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>A—WEST-COAST :</b>						
Kandla . . . . .	7.01	11.27	6	7	4	1
Bombay <sup>£</sup> . . . . .	5.18	7.62	—	60	..	17
Mormugao . . . . .	4.27	8.53	5	6	1	1
Mangalore £ . . . . .	2.00	3.00	—	7	3%	—
Cochin . . . . .	2.63	9.75	12	13	3@	—
<b>B—EAST-COAST :</b>						
Madras . . . . .	7.90	13.40	3	19	2	—
Tuticorin £ . . . . .	2.50	3.00	—	1	3	—
Vishakhapatnam . . . . .	8.54	10.21	4	11	3	—
Paradip. . . . .	10.05	11.28	1	1	—	4
Calcutta . . . . .	0.40	8.90	32*	53	18**	9
<b>TOTAL (A+B)</b> . . . . .			63	181	37	26

£ Being developed as a Major Port.

%Wooden Jetties.

@At Present used for handling cashew oil etc.

\*Including 10 Moorings in disuse/out of commission.

\*\*Including Calcutta Garden Reach, Budge Budge and Haldia.

\$As on 31-3-1972.

Note :—(i) Jetty and bunder : It is a port facility for a ship in unprotected water with a landing facility and unassured draft.

(ii) Mooring : It is a port facility with assured draft but no landing facility.

(iii) Berth : It is a port facility with assured draft and landing facility.



TABLE No. 11(4)

# BERTHS, WAREHOUSES AND TRANSIT SHEDS AT MAJOR PORTS (as on 31-3-1973)

Ports	No. of Berths				
	Total	For Coal	For Ores	General Cargo	For Passengers
(1)	(2)	(3)	(4)	(5)	(6)
<b>A—WEST-COAST :</b>					
Kandla . . .	7	—	—	4	2
Bombay . . .	60*	—	—	40	6
Mormugao . . .	6	—	1	5	—
Mangalore £ . .	7	—	2	4	—
Cochin . . .	13	2	—	9	—
<b>B—EAST-COAST :</b>					
Madras . . .	19	2	4	7	—
Tuticorin £ . . .	4	2	—	—	—
Visakhapatnam . .	11	—	4	4	—
Paradip . . .	1	—	1	—	—
Calcutta . . .	52	6	3	30	—
<b>TOTAL (A+B)</b>	<b>180</b>	<b>12</b>	<b>15</b>	<b>111</b>	<b>13</b>

\*As on 31-3-72.

£Being developed as Major Ports.

TABLE No. 11(4)—Contd.

Port	Other Berths (Not)	Warehouses		Transit sheds	
		No.	Area ('000 Sq. M.)	No.	Area ('000 Sq. M.)
(1)	(7)	(8)	(9)	(10)	(11)
<b>A—WEST COAST.</b>					
Kandla	1(a)	1	14.0	9	27.3
Bombay	4(b)	7(f)	65.3(c)	31(d)	220.6
Mormugao	—	7	12.7	3	7.5
Manzanere	—	5(e)	20.0 (f)	4	2.0
Cochin	2	5	13.7	12	33.8
<b>B—EAST COAST</b>					
Madras	5	16	78.0	10	47.0
Tuticorin	2(g)	—	—	13	8.0
Visakhapatnam	3	5	27.0	5	22.0
Paradip	—	—	—	—	—
Calcutta	12	59	475.3	35	200.2
<b>TOTAL (A+B)</b>	<b>29</b>	<b>108</b>	<b>738.0</b>	<b>122</b>	<b>618.4</b>

ℓ Being developed as Major Ports.

(a) For oil Tankers.

(b) Oil Tanker Berths.

(c) Includes 8.1 thousand sq. M. area of 3 compartments at Wadi Bunder Warehouse.

(d) Excludes Passengers' sheds, one at Indra Dock and one at Victoria Dock as on 30-9-72.

(e) Out of 5 warehouses 2 are privately owned.

(f) As on 30-9-72.

(g) Combined of general cargo and Passengers.

TABLE No. 11(5)  
STAFF POSITION AT MAJOR AND OTHER PORTS  
(As on 31-3-1973)

(In Numbers)

Maritime States U.T./Ports	Total		1972-73			
	1971-72	1972-73	Officers whose pay exceeds Rs. 1000	Officers whose pay is between Rs. 500 and Rs. 1000	Officers whose pay is between Rs. 250 and Rs. 500	Officers whose pay is Rs 250 and less
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>A—WEST COAST</b>						
<i>Gujarat :</i>						
Kandla . . .	2,499	2,379	30	191	1,121	1,037
Other Ports . .	1,944	2,217	—	4	107	2,106
<i>Maharashtra :</i>						
Bombay . . .	30,099	30,275	..		..	..
Other Ports . .	249	235	4	2	22	207
<i>Goa :</i>						
Mormugao . . .	2,523	2,250	18	76	319	1,837
Other Ports . .	120	124	2	3	117	2
<i>Karnataka :</i>						
Mangalore . . .	138	138	2	37	57	42
Other Ports . .	189	157	2	—	24	131
<i>Kerala :</i>						
Cochin . . .	4,815	5,498	52	462	2,303	2,681
Other Ports . .	106	169	2	1	20	146

TABLE No. 11(5)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>E—EAST COAST</b>						
<i>Tamil Nadu :</i>						
Madras . . .	10,004	11,588	96	1,073	8,402	2,017
Tuticorin . . .	273	261	4	8	76	173
Other Ports . . .	161	161*	..	..	..	..
<i>Pondicherry :</i>						
Pondicherry . . .	62	61	1	—	1	59
<i>Andhra Pradesh :</i>						
Visakhapatnam . . .	10,004	10,049	64	305	4,964	4,636
Other Ports . . .	273	220	3	11	11	165
<i>Orissa :</i>						
Paradip . . .	81	96	3	25	58	10
Other Ports . . .	9	9*	..	..	..	..
<i>West Bengal :</i>						
Calcutta . . .	42,578	41,724	900	2,624	11,900	26,300
Andamans & Nicobar Islands . . .						
Port Blair . . .	..	31	2	—	28	1
<b>TOTAL</b>	<b>108192</b>	<b>1,07,642</b>	<b>1185</b>	<b>4,902</b>	<b>29,560</b>	<b>41,550</b>

\* Figures are for 1971—72.

Notes: (i) Pay is inclusive of all the allowances drawn by the individual during the year.

(ii) Total of col. (4) to (7) will not agree with col (3) because the break up is not available in each case.

( )

TABLE No 11(6)

# NO. OF DOCK WORKERS REGISTERED WITH DOCK LABOUR BOARDS AT MAJOR PORTS (1972-73)

(In Numbers)							Total
Maritime States/ UT/Ports	Fore- men	Win- chmen Dri- vers	Wor- kers/ Max- doors	Tindals	Clerks	All Others	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>A—WEST-COAST</b>							
Gujarat :							495
Kandla	—	—	462	33	—	—	
Maharashtra :							3,600
Bombay	283	292	2,166(a)	418	312	177	
Goa :							2,931
Mormugao	—	1,004	1,927	—	—	—	
Kerala :							1,791
Cochin	—	194	1,128	107	175	117	
<b>B—EAST-COAST</b>							
Tamil Nadu :							2,017
Madras	—	251	1,282	96	232	216	
Andhra Pradesh :							1,066
Visakhapatnam	—	95	767	58	45	101	
Orissa :							—
Paradip	—	—	—	—	—	—	
West Bengal :							14,077
Calcutta	364	835	5,983	240	1,203	5,452	

(a) Senior Workers.

## NO. OF SHIP CALLS AT THE MAJOR AND OTHER

Maritime State/U. T./Ports	No. of sailing Vessels	No. of Steamers			
		Total	With Indian flag	With Foreign Flag	
		1971-72 1972-73	1971-72 1972-73	1971-72 1972-73	1971-72 1972-73
(1)	(2)	(3)	(4)	(5)	(6) (7) (8) (9)
A. West-Coast :	59,445	64,332	5,470	5,383	2,180 2,230 3,290 3,153
Gujarat :					
Kandla . . . . .	59	100	250	281	78 109 172 172
Other Ports . . . . .	10,882	11,762	690	651	381 345 309 306
Maharashtra :					
Bombay . . . . .	19,998	21,136	2,493	2,450	1,119 1,112 1,374 1,338
Other Ports . . . . .	15,719	20,796	35	29	3 6 32 23
Goa :					
Mormugao . . . . .	131	32	629	617	90 101 539 516
Other Ports . . . . .	1,229	1,173	—	1	— — — 1

TABLE No-11(7)--Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Karnataka :								
Mangalore .	4,303	1,301	142	182	17	42	125	140
Other Ports	3,930	4,061	55	80	13	55	42	25
Kerala :								
Cochin .	19	21	1,031	1,007	397	416	634	591
Other Ports	1,145	917	145	85	82	41	63	41
B. East Coast	3,712	598	3,660	3,382	1,146	1,193	2,211	1,989
Tamil Nadu :								
Madras .	2	—	916	919	325	323	591	596
Port Blair .	667	444	143	311	261	190	182	121
Other Ports	2,522	154	260	294	189	225	71	69
Pondicherry .	—	—	27	11	1	—	26	11
Andhra Pradesh :								
Visakhapatnam .	—	—	556	500	126	143	130	357
Other Ports	—	—	122	116	36	41	86	75

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Orissa :								
Paradip	521	—	92	76	14	12	78	64
Other Ports	—	—	—	—	—	—	—	—
West Bengal :								
Calcutta	—	—	1,244	1,155	494	559	750	596
Total	63,157	64,930	9,130	8,765	3,626	3,728	5,504	5,042



TABLE No. 11(8)  
TRENDS IN TOTAL PASSENGER TRAFFIC  
(1960-61 to 1972-73)

(In '000 Numbers)

Maritime States/ U.T./Ports	1960-61	1965-66	1970-71	1971-72	1972-73
(1)	(2)	(3)	(4)	(5)	(6)
<b>A—WEST-COAST</b>	1229.4	1612.7	8547.4	6012.7	6136.0
<i>Gujarat :</i>				15.3	—
Kandla*	160.7	174.5	59.6	23.5	8.5
Other Ports	70.6	26.3	47.0		
<i>Maharashtra :</i>					487.2
Bombay	919.1	748.0	583.2	524.4	1936.0
Other Ports	...	599.5	1767.6	1767.5	
<i>Goa :</i>				1.5	1.0
Mormugao	8.6	21.4	2.9	3668.7	3692.5
Other Port	...	...	6079.9		
<i>Mysore :</i>					0.3
Mangalore	14.5	15.3	—	—	—
Other Ports	52.0	22.9	—	—	—
<i>Kerala :</i>				6.1	7.3
Cochin	3.9	2.0	4.4	3.9	3.2
Other Ports	...	2.8	2.8		
<b>B—EAST-COAST</b>	92.8	157.0	192.5	168.2	1405.7
<i>Tamil Nadu :</i>					0.04
Tuticorin	—	10.4	(0.03)	(0.03)	75
Madras	65.3	107.9	77.0	78.6	1302.9
Other Ports	..	18.9	97.2	66.4	
<i>Pondicherry</i>	—	—	—	—	—

TABLE No. 11 (B)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)
Andhra Pradesh :					
Visakhapatnam	—	9.6	—	3.0	—
Other Ports	—	—	—	—	—
Orissa :					
Paradip	—	—	—	—	—
Other Ports	—	—	—	—	—
West Bengal :					
Calcutta	27.5	10.2	10.3	20.2	27.1
<b>C ISLANDS</b>					
Port Blair	...	20.7	...	...	52.9
<b>Total (A+B+C)</b>	<b>1322.2</b>	<b>1790.4</b>	<b>8739.9</b>	<b>6180.9</b>	<b>7594.6</b>

\*Ferry services between Kandla and Navlakhi were discontinued w.e.f. 31-1-72.

\*\*Includes 1201.4 thousands of Coastal Passenger traffic embarked and disembarked at Kanya Kumari Port between shore to Vivekananda Rock.

TABLE No. 11(9)

TRENDS IN TOTAL TRAFFIC IN PRINCIPAL BULK AND OTHER  
COMMODITIES AT THE MAJOR PORTS IN 1960-61, 1965-66 AND  
1970-71 to 1972-73

(In lakh tonnes)

Ports	Commodities				
	Mineral Oils				
	1960-61	1965-66	1970-71	1971-72	1972-73
(1)	(2)	(3)	(4)	(5)	(6)
<b>A—WEST COAST</b>					
Kandla . . .	7	9	9	15	14
Bombay* . . .	70	94	83	96	96
Mormugao . . .	—	1	2	3	4
Cochin . . .	6	10	36	34	30
<b>B—EAST COAST</b>					
Madras . . .	6	9	27	28	50
Visakhapatnam . . .	16	20	17	19	18
Paradip . . .	—	—	—	—	—
Calcutta . . .	15	14	14	19	20
<b>TOTAL (A+B) . . .</b>	<b>120</b>	<b>157</b>	<b>188</b>	<b>212</b>	<b>212</b>

\*Excludes Overseas Traffic.

TABLE No. 11(9)—Contd.

(In lakh tonnes)

Ports	Commodities				
	Iron Ore				
	1960-61	1965-66	1970-71	1971-72	1972-7
(1)	(7)	(8)	(9)	(10)	(11)
<b>A—WEST COAST</b>					
Kandla	1	—	—	—	—
Bombay	1	2	—	—	—
Mormugao	59	75	96	106	117
Cochin	—	—	—	—	—
<b>B—EAST COAST</b>					
Madras	5	12	21	21	21
Visakhapatnam	1	11	49	47	41
Paradip	—	—	22*	19@	20%
Calcutta	—	10£	4£	2£	2£
TOTAL (A+B)	67	110	192	195	201

£ Includes other ores also.

\* Includes about 17000 tonnes of chromic Ore, 3000 tonnes of ferro chrome and 3000 tonnes of General Cargo.

@ Includes 1,06,968 tonnes of chromic ore and 893 tonnes of fish.

% Includes 1,48,288 tonnes of chromic ore and 1167 tonnes of fish.

TABLE No. 11(2)—Contd.

(in lakh tonnes)

Ports	Commodities				
	Coal				
	1962-61	1963-66	1970-71	1971-72	1972-73
(1)	(12)	(13)	(14)	(15)	(16)
<b>A—WEST-COAST</b>					
Kandla . . .	—	—	—	—	—
Bombay . . .	—	—	—	—	—
Mormugao . . .	—	—	—	—	—
Cochin . . .	3	2	—	1	1
<b>B—EAST-COAST</b>					
Madras . . .	4	4	—	—	(0.2)
Viskhapatnam . . .	1	—	—	—	—
Paradip . . .	—	—	—	—	—
Calcutta . . .	14	14	7	8	8
<b>TOTAL (A+B)</b> . . .	<b>22</b>	<b>20</b>	<b>7</b>	<b>9</b>	<b>9</b>

TABLE No 11(9)—Contd.

(In lakh tonnes)

Ports	Commodities				
	Fertiliser/Rock phosphate / Sulphur				
	1960-61	1965-66	1970-71	1971-72	1972-73
(1)	(17)	(18)	(19)	(20)	(21)
<b>A—WEST COAST</b>					
Kandla . . . . .	—	1	2	5	6
Bombay . . . . .	2	5	11	14	16
Mormugao . . . . .	—	1	1	1	1
Cochin . . . . .	1	2	3	2	2
<b>B—EAST COAST</b>					
Madras . . . . .	2	5	5	5	6
Vishakhapatnam . . . . .	—	1	6	7	6
Paradip . . . . .	—	—	—	—	—
Calcutta . . . . .	1	—	—	2	4
Total (A+B) . . . . .	6	18	29	36	4

TABLE No. 11(9)—Coke/D.

(In lakh tonnes)

Ports	Commodities				
	Foodgrains				
	1960-61	1965-66	1970-71	1971-72	1972-73
(1)	(2)	(3)	(4)	(5)	(6)
<b>A—WEST-COAST</b>					
Kandla . .	4	12	5	1	2
Bombay . .	22	26	10	5	5
Mormugao .	—	—	—	—	1
Gochia . .	1	6	2	1	1
<b>B—EAST-COAST</b>					
Mumbai . .	4	9	7	6	2
Vizakhapatnam .	3	4	2	3	1
Paradip . .	—	—	—	—	—
Cuttack . .	18	15	9	11	2
<b>Total (A+B)</b> .	<b>52</b>	<b>72</b>	<b>33</b>	<b>27</b>	<b>14</b>

TABLE No. 11(9)—Contd.

(In lakh tonnes)

Ports	Commodities				
	Iron, Steel & Machinery				
	1960-61	1965-66	1970-71	1971-72	1972-73
(1)	(27)	(28)	(29)	(30)	(31)
<b>A—WEST-COAST</b>					
Kandla . .	1	—	—	—	—
Bombay . .	7	9	6	10	8
Mormugao .	—	—	—	—	—
Cochin . .	1	—	—	—	(0.5)
<b>B—EAST-COAST</b>					
Madras . .	1	2	2	2	2
Visakhapatnam .	1	1	4	2	3
Paradip . .	—	—	—	—	—
Calcutta . .	6	9	6	9	8
<b>TOTAL (A+B)</b> .	<b>17</b>	<b>21</b>	<b>18</b>	<b>23</b>	<b>21</b>



TABLE No. 11(9)—Contd.

(In lakh tonnes)

Ports	Commodities				
	Other Cargo				1972-73
	1960-61	1965-66	1970-71	1971-72	
(1)	(32)	(33)	(34)	(35)	(36)
<b>A—WEST-COAST</b>					
Kandla . . .	3	5	2	1	3
Bombay . . .	41	43	34	37	34
Mormugao . . .	5	2	11	7	6
Cochin . . .	8	9	7	9	8
<b>B—EAST-COAST</b>					
Madras . . .	8	8	7	6	7
Visakhapatnam . . .	6	7	9	8	5
Paradip . . .	—	—	—	—	—
Calcutta . . .	40	32	19	22	22
TOTAL (A+B) . . .	111	104	89	90	85

TABLE No. 11(9)—Contd.

(In lakh tonnes)

Ports	Commodities				
	Total				
	1960-61	1965-66	1970-71	1971-72	1972-73
(1)	(37)	(38)	(39)	(40)	(41)
<b>1—WEST-COAST</b>					
Kandla	16	25	16	20	2
Bombay	143	179	144	162	159
Mormugao	64	79	110	117	129
Cochin	20	29	48	47	42
<b>2—EAST-COAST</b>					
Madras	30	49	69	60	68
Visakhapatnam	20	44	87	86*	74*
Paradip	—	—	22	19	20
Calcutta	94	97	60	73	66
<b>TOTAL (A+D)</b>	<b>395</b>	<b>502</b>	<b>556</b>	<b>592</b>	<b>503</b>

\* Excluding 20 thousand tonnes of transshipment cargo in 1971-72 and 57 thousand tonnes in 1972-73.

TABLE No. 11(10)

## TRENDS IN COASTAL CARGO-TRAFFIC AT MAJOR AND OTHER PORTS (1960-61 to 1972-73)

(In '000 tonnes)

Maritime States/U.T./ Ports	1960-61	1965-66	1970-71	1971-72	1972-73
(1)	(2)	(3)	(4)	(5)	(6)
<b>A—WEST-COAST</b>	6,526	9,362	7,056	8,005	7,434
<i>Gujarat :</i>					
Kandla . . .	400	567	705	856	1,111
Other Ports . . .	1,371	1,740	1,212	1,439	1,144
<i>Maharashtra:</i>					
Bombay <sup>1</sup> . . .	3,294	4,373	2,816	3,368	3,029
Other Ports: . . .	...	544	359	311	253
<i>Goa:</i>					
Mormugao . . .	—	164	267	349	333
Other Ports . . .	...	...	75	31	11
<i>Karnataka :</i>					
Mangalore . . .	259	265	232	252	255
Other Ports . . .	139	187	123	164	165
<i>Kerala :</i>					
Cochin . . .	1,063	1,245	1,069	1,022	974
Other Ports . . .	...	257	138	153	125

<sup>1</sup> Excludes overseas traffic.

TABLE No. 11.(10)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)
<b>EAST-COAST</b>	5,020	5,680	2,949	3,927	3,937
<i>Tamil Nadu :</i>					
Madras	818	1,176	607	430	477
Tuticorin	712	701	280	765	667
Other Ports	...	139	24	19	14
Pondicherry	—	—	—	—	—
<i>Andhra Pradesh :</i>					
Visakhapatnam	601	690	387	331	317
Other Ports	—	6	—	7	—
<i>Orissa :</i>					
Paradip	...	...	1	1	1
Other Ports	—	—	—	—	—
<i>West Bengal :</i>					
Calcutta	2,889	2,968	1,650	2,374	2,461
<b>TOTAL (A+B)</b>	11,546	15,042	10,005	11,932	11,391

TABLE No. 11(11)

## TRENDS IN FOREIGN CARGO TRAFFIC AT MAJOR AND OTHER PORTS (1960-61 to 1972-73)

(In '000 tonnes)

Maritime States/U.T./ Ports	1960-61	1965-66	1970-71	1971-72	1972-73
(1)	(2)	(3)	(4)	(5)	(6)
<b>A—WEST COAST</b>	21,006	27,56	29,899	31,840	33,13
<i>Gujarat :</i>					
Kandla . . .	1,173	1,938	907	1,176	1,176
Other Ports . .	1,013	1,523	1,454	1,537	1,537
<i>Maharashtra :</i>					
Bombay . . .	11,055	13,537	11,554	12,770	12,770
Other Ports . .	—	332	559	504	504
<i>Goa :</i>					
Mormugao . . .	6,401*	7,703	10,738	11,351	11,351
Other Ports . .	—	—	—	—	—
<i>Karnataka :</i>					
Mangalore . . .	146	228	166	91	91
Other Ports . .	271	506	584	582	582
<i>Kerala :</i>					
Cochin . . .	947	1,627	3,743	3,612	3,612
Other Ports . .	—	166	194	217	217

\*Includes coastal total traffic also.

§Excludes outside trade

TABLE No. 11(11)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)
<b>EAST COAST</b>	11,381	15,319	22,438	22,630	20,973
<i>Tamil Nadu :</i>					
Madras	2,221	3,696	6,318	6,362	6,339
Tuticorin	247	272	925	258	360
Other Ports	...	392	290	263	379
Pondicherry	Included in Tamil Nadu	52	188	138	98
<i>Andhra Pradesh :</i>					
Visakhapatnam	2,162	3,770	8,346	8,307	7,092
Other Ports	249	576	500	477	527
<i>Orissa :</i>					
Paradip	...	...	2,156	1,905	2,022
Other Ports	—	—	—	—	—
<i>West Bengal :</i>					
Calcutta	6,502	6,761	4,315	4,920	4,156
<b>Total (A+B)</b>	<b>32,387</b>	<b>42,879</b>	<b>52,337</b>	<b>54,470</b>	<b>54,958</b>

TABLE No. 11(12)

CARGO IMPORTS OF INDIA THROUGH PORTS —BY COUNTRIES  
OF ORIGIN DURING 1972-73

(In '000 tonnes)

Maritime States/ U.T./Ports	Total Imports	Imports from other Indian Ports	Im- ports from foreign countri- es	Imports from foreign countries by origin			
				Adja- cent coun- tries	Japan	Other Asian coun- tries	USA Can
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>A—WEST COAST</b>	19,726	3,391	16,335	8	408	11,474	905
<i>Gujarat :</i>							
Kandla	2,085	557	1,528	—	—	968	157
Other Ports	944	470	474	—	—	9	47
<i>Maharashtra :</i>							
Bombay*	12,662	1,399	11,263	7	367	8,083	652
Other Ports	152	152	—	—	—	—	—
<i>Goa</i>							
Mormugao	486	383	103	—	13	59	(0.3)
Other Ports	28	28	—	—	—	—	—
<i>Karnataka :</i>							
Mangalore	103	59	44	—	(0.1)	—	—
Other Ports	31	31	—	—	—	—	—
<i>Kerala :</i>							
Cochin	3,115	275	2,840	1	28	2,354	46
Other Ports	120	37	83	—	—	1	3

\*Excludes overside traffic but includes 2 thousand tonnes of foreign  
of bunker oil.

TABLE NO. 11(12)—Contd.

ARGO IMPORTS OF INDIA THROUGH PORTS—BY COUNTRIES  
OF ORIGIN DURING 1972-73

(In '000 tonnes)

Maritime States/ U.T./Ports	Imports from foreign countries by origin					
	U.K.	West Ger- many	USSR	African coun- tries	Austra- lia & N.Z.	Others
(1)	(10)	(11)	(12)	(13)	(14)	(15)
<b>WEST COAST</b>	319	143	308	505	93	1,708
Mumbai	36	—	36	—	—	237
Other Ports	—	—	13	27	—	372
<b>MAHARASHTRA</b>						
Mumbai	278	119	209	219	78	925
Other Ports	—	—	—	—	—	—
<b>GOA</b>						
Portuguese	—	2	—	(0.1)	—	29
Other Ports	—	—	—	—	—	—
<b>KARNATAKA</b>						
Bangalore	—	5	19	7	—	13
Other Ports	—	—	—	—	—	—
<b>ANDHRA PRADESH</b>						
Vishakhapatnam	5	17	31	188	15	123
Other Ports	—	—	—	64	—	9

\* Exclude overside traffic but include 2 thousand tonnes of foreign imports  
in kerosene oil.



TABLE No. 11(12)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>B—EAST-COAST</b>	<b>11,399</b>	<b>2,378</b>	<b>9,021</b>	<b>87</b>	<b>651</b>	<b>4,936</b>	<b>813</b>	<b>60</b>
<i>Tamil Nadu :</i>								
Madras .	4069	147	3,922	33	165	2,849	269	41
Tuticorin .	522	324	198	8	29	—	63	55
Other Ports	144	7	137	—	39	14	12	21
<i>Pondicherry :</i>	98	—	98	—	47	—	—	—
<i>Andhra Pradesh</i>								
Visakhapatnam	2,372	122	2,250	—	76	1,467	289	11
Other Ports .	45	—	45	—	—	24	—	—
<i>Orissa :</i>								
Paradip .	1	1	—	—	—	—	—	—
Other Ports .	—	—	—	—	—	—	—	—
<i>West Bengal :</i>								
Calcutta .	4,148	1,777	2,371	46	295	—	582	189
<b>TOTAL (A+B) .</b>	<b>31,125</b>	<b>5,769</b>	<b>25,356</b>	<b>95</b>	<b>1,059</b>	<b>16,410</b>	<b>1,718</b>	<b>178</b>

TABLE No. 11(12)—*Contd.*

(In '000 tonnes)

(1)	(10)	(11)	(12)	(13)	(14)	(15)
<b>B—EAST COAST</b>	<b>251</b>	<b>276</b>	<b>561</b>	<b>128</b>	<b>60</b>	<b>817</b>
<i>Tamil Nadu :</i>						
Madras	53	118	61	40	4	292
Tuticorin	—	—	31	6	—	8
Other Ports	—	—	—	—	—	44
<i>Portocherry :</i>	—	—	—	—	—	51
<i>Andhra Pradesh :</i>						
Vishakhapatnam	5	21	136	—	—	154
Other Ports	—	—	—	—	—	21
<i>Orissa :</i>						
Paradip	—	—	—	—	—	—
Other Ports	—	—	—	—	—	—
<i>West Bengal :</i>						
Calcutta	193	137	333	82	56	247
<b>TOTAL (A+B)</b>	<b>570</b>	<b>419</b>	<b>869</b>	<b>633</b>	<b>153</b>	<b>2,522</b>

TABLE No. 11(13)

## CARGO EXPORTS OF INDIA THROUGH PORTS BY COUNTRIES OF DESTINATION (1972-73)

(In '000 tonnes)

Maritime States/ U.T./Ports	Total exports	Exports to other Indian ports	Exports to foreign coun- tries	Adja- cent coun- tries	Japan	Other Asian coun- tries	U.S.A.	Ca- nada
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>A—WEST COAST</b>	<b>21,115</b>	<b>4,063</b>	<b>17,052</b>	<b>216</b>	<b>11,796</b>	<b>1,105</b>	<b>230</b>	<b>11</b>
Gujarat :								
Kandla :	342	161	181	68	—	70	6	—
Other Ports :	2,051	949	1,102	—	128	226	5	—
Maharashtra :								
Bombay :	3,265	1,605	1,660	120	202	359	140	—
Other Ports :	1,057	236	821	—	80	293	—	—
Goa :								
Mormugao :	12,360	—	12,360	—	11,209	133	—	—
Other Ports :	23	10	13	—	—	—	—	—
Karnataka :								
Mangalore :	267	199	68	—	—	3 (0.2)	8	—
Other Ports :	524	134	390	—	—	61	—	—
Kerala :								
Cochin :	1,087	701	386	28	52	17	69	—
Other Ports :	139	68	71	—	55	7	2 (0.2)	—
<b>B—EAST COAST</b>	<b>13,511</b>	<b>1,559</b>	<b>11,952</b>	<b>386</b>	<b>8,046</b>	<b>350</b>	<b>360</b>	<b>13</b>
Tamil Nadu :								
Madras :	2,747	330	2,417	12	1,642	36	10 (0.2)	—
Tuticorin :	505	343	162	24	201	92	2	—
Other Ports :	249	7	242 (0.02)	—	—	13	—	—
Pondicherry :								
Andhra Pradesh :								
Visakhapatnam :	5,037	195	4,842	63	4,479	12	59	—
Other Ports :	482	—	482	22	265	41	—	—
Orissa :								
Paradip :	2,022	—	2,022	—	1,152	—	—	—
Other Ports :	—	—	—	—	—	—	—	—
West Bengal :								
Calcutta :	2,469	634	1,785	265	307	156	289	—
<b>TOTAL (A+B)</b>	<b>34,626</b>	<b>5,622</b>	<b>29,004</b>	<b>602</b>	<b>19,836</b>	<b>1,455</b>	<b>590</b>	<b>54</b>

Includes overseas traffic.

TABLE No. 11(13)—Contd.

Maritime States/U.T./ Ports	U.K.	West Germany	U.S.S. R.	African Coun- tries	Australia & N.Z.	Others
(1)	(10)	(11)	(12)	(13)	(14)	(15)
<b>A—WEST COAST</b>	456	101	581	119	20	2,413
<i>Gujarat :</i>						
Kandla . . . .	29	—	—	8	—	—
Other Ports . . .	111	—	119	—	—	512
<i>Maharashtra :</i>						
Bombay* . . . .	120	42	116	94	9	451
Other Ports . . .	6	37	190	—	—	55
<i>Goa :</i>						
Mormugao . . . .	6	4	3	—	—	1,005
Other Ports . . .	—	—	—	—	—	13
<i>Karnataka :</i>						
Mangalore . . . .	1	3	46	—	(0.3)	7
Other Ports . . .	—	—	39	—	—	290
<i>Kerala :</i>						
Cochin . . . . .	21	14	67	17	11	77
Other Ports . . .	2	1	1	—	—	3
<b>B—EAST COAST</b>	160	53	471	145	62	1,886
<i>Tamil Nadu :</i>						
Madras . . . . .	42	8	54	6	2	605
Tuticorin . . . .	2	4	—	—	—	38
Other Ports . . .	—	—	—	—	—	28
<i>Pondicherry :</i>						
Pondicherry . . .	—	—	—	—	—	—
<i>Andhra Pradesh :</i>						
Vishakhapatnam .	2	2	115	5	—	105
Other Ports . . .	36	3	59	(0.3)	—	56
<i>Orissa :</i>						
Paradip . . . . .	—	—	—	—	—	870
Other Ports . . .	—	—	—	—	—	—
<i>West Bengal :</i>						
Calcutta . . . . .	78	96	243	194	60	184
<b>TOTAL (A+B)</b>	616	154	1,052	264	82	4,299

\*Excludes overside traffic.

- TABLE No. 11(14) -

**TURN-ROUND TIME OF SHIPS AT MAJOR PORTS**  
(1966-67 to 1972-73)

Major Ports	1966-67*	1967-68*	1968-69*	1969-70*
(1)	(2)	(3)	(4)	(5)
<b>WEST COAST</b>				
Kandla .	11.92	9.72	7.70	4.42
Bombay .	6.80	7.75	6.69	5.00
Mormugao	5.52	7.16	8.70	9.80
Cochin .	6.31	6.18	6.37	4.70
<b>EAST COAST</b>				
Madras .	7.81	8.39	8.00	6.20
Vishakhapatnam	7.21	7.47	6.15†	5.50†
Paradip .	...	...	...	6.11
Calcutta .	...	12.20	7.64	7.32

\*Source: Bombay Port Trust, Monthly Bulletin Nov. & Dec. 1970.

\*\*Figures have been computed on the basis of the statistics supplied by the respective Port Trusts.

†As supplied by Vishakhapatnam Port Trust.

## TURN-ROUND TIME OF SHIPS AT MAJOR PORTS

(1966-67 to 1972-73)

Major Ports	1970-71**	1971-72**	1972-73**
(1)	(6)	(7)	(8)
<b>WEST COAST</b>			
Kandla . . . . .	4.95	6.83	7.09
Bombay . . . . .	5.68	6.20	7.43
Mormugao . . . . .	10.40	10.64	9.98
Cochin . . . . .	4.72	4.88	4.87
<b>EAST COAST</b>			
Madras . . . . .	6.39	7.19	6.31@
Visakhapatnam . . . . .	5.85	5.23	4.46
Paradip . . . . .	10.91	7.60	9.73
Calcutta . . . . .	7.40	7.58	7.41

@Covers only time taken at berths and waiting for berths.

\*\* Figures have been computed on the basis of the statistics supplied by the respective Port Trusts.

TABLE No. 11(15)

REVENUE ACCOUNT OF INCOME AND EXPENDITURE OF MAJOR  
AND OTHER PORTS (1970-71 to 1972-73)

(Rs. in lakhs)

Maritime States/ U.T./Ports	1970-71		
	Revenue	Expenditure	Surplus (+) Deficit (-)
(1)	(2)	(3)	(4)
<b>A—WEST COAST</b>			
<i>Gujarat :</i>			
Kandla . . . . .	241.5	258.8	-17.3
Other Ports . . . . .	179.6	323.6	-144.0
<i>Maharashtra :</i>			
Bombay . . . . .	2,513.9	2,204.3	+309.6
Other Ports . . . . .	6.6	49.7	-43.1
<i>Goa :</i>			
Mormugao . . . . .	286.2	201.2	+85.0
Other ports . . . . .	...	...	...
<i>Karnataka :</i>			
Mangalore . . . . .	9.0	10.0	-1.0
Other Ports . . . . .	7.7	11.7	-4.0
<i>Kerala :</i>			
Cochin . . . . .	421.7	362.6	+59.1
Other Ports . . . . .	8.2	10.6	-2.4

TABLE No. 11 (15)—Contd.

(Rs. in lakhs)

Maritime States/ U.T./Ports	1971-72			1972-73		
	Revenue	Expen- diture	Surplus (+) Deficit (—)	Revenue	Expen- diture	Surplus (+) Deficit (—)
(1)	(5)	(6)	(7)	(8)	(9)	(10)
<b>A—WEST COAST</b>						
<i>Gujarat :</i>						
Kanika . . .	270.9	266.7	+4.2*	315.0	300.4	+14.6
Other Ports . . .	201.6	217.7†	—16.1	201.7	201.2	—79.5
<i>Maharashtra :</i>						
Bombay . . .	3,043.6	2,520.7	+522.9	2,972.9	2,408.9	+464.0
Other Ports . . .	5.8	..	..	8.0	..	..
<i>Goa :</i>						
Mormugao . . .	275.0	211.8	+63.2	344.2	232.5	+111.7
Other Ports . . .	2.5	5.9	—3.4	1.7	..	..
<i>Karnataka :</i>						
Mangalore . . .	10.9	12.7	—1.8	15.8	16.5	—0.7
Other Ports . . .	8.3	6.6	+1.7	8.0	0.1	—0.1
<i>Kerala :</i>						
Cochin . . .	..	..	..	..	..	..
Other Ports . . .	8.7	11.8	—3.1	10.2	13.3	—3.1

\*Less Transfers to Reserve etc.

Employees Welfare Fund = Rs. 0.2 lakhs.

Repayment of loans from Govt. = 1.4 Lakhs.

Net Surplus = Rs. 2.6 Lakhs.

†Over and above an amount of Rs. 27.2 lakhs have been met from Port  
Depreciation Reserve funds to replace equipment etc.)



TABLE No. 11(15)—Contd.

(1)	(2)	(3)	(4)
<b>B—EAST COAST</b>			
<i>Tamil Nadu :</i>			
Madras . . . . .	1169.7	844.2	+325.5
Tuticorin . . . . .	50.0	42.4	+ 8.0
Other Ports . . . . .	9.4	11.0	— 1.6
<i>Pondicherry</i> . . . . .	3.4	2.9	+ 0.5
<i>Andhra Pradesh :</i>			
Visakhapatnam . . . . .	915.2	661.0	+284.2
Other Ports . . . . .	16.7	1.9	+14.8
<i>Orissa :</i>			
Paradip . . . . .	177.9	180.9	— 3.0
<i>West Bengal :</i>			
Calcutta . . . . .	2366.1	3264.6	—898.5

TABLE No. 11(15) — Contd.

(1)	(5)	(6)	(7)	(8)	(9)	(10)
<b>B—EAST COAST :</b>						
<i>Tamil Nadu :</i>						
Madras	1247.9	1250.3	—2.4	1152.1	1212.2	—60.1
Tuticorin	39.2	39.5	—0.3	40.0	47.7	—7.7
Other Ports	7.3	8.3	—1.0	—	...	...
Pondicherry	3.4	2.7	+0.7	2.8	6.3	—3.5
<i>Andhra Pradesh :</i>						
Visakhapatnam	1087.9	771.3	+316.6	972.9	820.7	+152.2
Other Ports	9.6	2.1	+7.5	11.1	7.3	3.8
<i>Orissa :</i>						
Paradip	193.1	366.8	—173.7	209.2	517.5	—308.3
<i>West Bengal</i>						
Calcutta	3042.0	4543.6	—1501.6	3217.1	3962.2	—745.1
<hr/>						
Includes	1. Repayment of loans			: Rs.	99.11 lakhs	
	2. Transfers of Reserves etc.			: Rs.	83.51 lakhs	
<hr/>						
Total				: Rs.	182.62 lakhs.	
<hr/>						

TABLE No.11(16)

## REVENUE ACCOUNT OF INCOME AND EXPENDITURE OF MAJOR PORTS BY MAJOR ITEMS (1972-73)

(Rs. in lakhs)

Maritime States/ U.T./Ports	Total Revenue	Total Expenditure	Surplus (+) Deficit (-)	By Sources	
				Ports & Dock including Pilotage	
				Revenue	Expen- diture
(1)	(2)	(3)	(4)	(5)	(6)
<b>A—WEST COAST :</b>					
Gujarat :					
Kandla	315.0	300.6	+ 14.6	29.3	99.0
Maharashtra :					
Bombay	2972.9	2488.9	+484.0	258.0	507.6
Goa :					
Mormugao	344.2	232.3	+111.7	81.5	81.5
Kerala :					
Cochin	...	...	...	...	...
<b>B—EAST COAST :</b>					
Tamil Nadu :					
Madras	1152.1	1212.2*	-60.1	88.1	131.2
Andhra Pradesh :					
Visakhapatnam	972.9	820.7	+152.2	93.2*	183.4*
Orissa :					
Paradip	209.2	517.5	-308.3	6.0	212.4
West Bengal :					
Calcutta	3217.1	3962.2LL	-745.1	323.6	1,062.2
				(Rs. in lakhs)	
* Includes :				1. Repayment of loans	99.1
				2. Transfer to Reserves	83.5
Total					182.6

TABLE No. 11 (16)—(Contd.)

Maritime States/ U.T./Ports	By Sources (Contd.)			
	Ports of Dock including pilots (contd.) Surplus (+) Deficit (—)	Cargo handling & Warehouses		
		Revenue	Expendi- ture	Surplus (+) Deficit (—)
(1)	(2)	(3)	(4)	(5)
<b>A—WEST COAST :</b>				
<i>Gujarat :</i>				
Kandla . . . . .	—69·7	195·9	60·9	+135·0
<i>Maharashtra :</i>				
Bombay . . . . .	—249·6	1812·1	990·3	+813·8
<i>Goa :</i>				
Mormugao . . . . .	—	219·0	25·9	+193·1
<i>Kerala :</i>				
Cochin . . . . .	...	...	...	...
<b>B—EAST COAST :</b>				
<i>Tamil Nadu :</i>				
Madras ... . .	—43·1	—902·7	406·0	+496·7
<i>Andhra Pradesh :</i>				
Visakhapatnam . . . . .	—90·2	708·8	270·1	+438·7
<i>Orissa :</i>				
Paradip . . . . .	—206·4	148·5	97·5	+51·0
<i>West Bengal :</i>				
Calcutta . . . . .	—738·4	1694·6	950·7	+743·9

TABLE No. 11(16)—Contd.

Maritime States/ U.T./Ports	By Sources (Contd.)			Land and Bldg.	
	Railways			Revenue	Expen- diture
	Revenue	Expen- diture	Surplus (+) Deficit (—)		
(1)	(11)	(12)	(13)	(14)	(15)
<b>A—WEST COAST:</b>					
Gujarat:		0.002	—0.002	22.1	20.9
Kandla					
Maharashtra:					
Bombay	150.8	215.9	—65.1	327.5	140.0
Goa:					
Mormugao	23.8	24.0	—0.2	6.7	10.8
Kerala:					
Cochin					
<b>B—EAST COAST:</b>					
Tamil Nadu:					
Madras	77.1	79.7	—2.6	8.9	16.3
Andhra Pradesh:					
Visakhapatnam(a)	103.7	57.8	+45.9	26.6	25.7
Orissa:					
Paradip	—	—	—	4.0	36.0
West Bengal:					
Calcutta	311.7	379.6	—67.9	258.3	50.2

(a) Including ferry services.

(Rs. in lakhs)

£. Includes Contribution from Govt. towards expenditure on river Dredging and River Maintenance. 464.00

££. Includes Additional charge to Revenue A/C. . . 115.80

TABLE No. 11 (16)—Contd.

Maritime/States/ U./T./Ports	By Sources (Contd.)				
	Land & Bldg. contd.	Revenue	Finance & Miscel- laneous		Manage- ment and General Adminis- tration Expendi- ture
			Expen- diture	Surplus (+) Deficit (—)	
(1)	(16)	(17)	(18)	(19)	(20)
<b>A—WEST COAST :</b>					
<i>Gujarat :</i>					
Kandla . .	+1.2	67.7	67.4	+0.3	51.8
<i>Maharashtra :</i>					
Bombay g. .	+187.5	424.5	247.5	+177.0	379.6
<i>Goa :</i>					
Mormugao .	—4.1	13.2	20.5	—7.3	69.8
<i>Kerala :</i>					
Cochin . .	...		...	...	..
<b>B—EAST COAST :</b>					
<i>Tamil Nadu :</i>					
Madras . .	—7.1	75.3	247.8	—172.5	148.6
<i>Andhra Pradesh :</i>					
Vlsakhapatnam .	+0.9	40.6	159.1	—118.5	124.6
<i>Orissa :</i>					
Paradip . .	—32.0	50.7	68.1	—17.4	103.5
<i>West Bengal :</i>					
Calcutta . .	+208.1	164.8	571.7	—406.9	832.3

**SECTION 12 : SHIPYARDS**

## SHIPYARDS AND SHIP REPAIRS

India has got an age old tradition in building sailing vessels whose development is looked after by the Directorate General of Shipping. Modern ship-building of our ocean going vessels commenced in 1946 with the establishment of the Hindustan Shipyard at Visakhapatnam. There are five shipbuilding undertakings, all in the public sector. The Mazgaon Dock Ltd., together with its subsidiary, the Goa Shipyard Ltd., and the Garden Reach Workshop Ltd. are under the management of the Ministry of Defence. The Hindustan shipyard and the Cochin Shipyard which is under construction are looked after by the Ministry of Shipping and Transport.

The Ship Repairs industry in India is an age old activity, the earliest undertaking being M/s. Mazgaon Dock Ltd., which was established in 1774. There are about 18 ship-repair undertakings which undertake repairs to ocean going ships. Of these, 7 are on the West-coast and 11 on the East-Coast. The eighteen ship-repair yards include the public sector units viz; M/s. Mazgaon Dock Ltd., M/s. Garden Reach Workshops Ltd. and M/s. Hindustan Shipyard Ltd., which undertake construction of ships for various purposes. In addition, some of the major ports have also dry dock facilities for undertaking repairs to ships.



TABLE No. 12(1)

# PRODUCTION OF SHIP-BUILDING INDUSTRY IN PUBLIC SECTOR (1968-69 to 1972-73)

(Rs. in lakhs)

Sl. No.	Name of the Undertaking/year	New Construction	Ship Repairs	Gen. Engineering & Misc. Work	Total
(1)	(2)	(3)	(4)	(5)	(6)
1	<i>Hindustan Shipyard Ltd.</i>				711
	1968-69 . . .	—	—	—	697
	1969-70 . . .	—	—	—	816
	1970-71 . . .	—	—	—	902
	1971-72 . . .	—	—	—	1276
	1972-73 . . .	—	—	—	
2	<i>Mazgaon Dock Ltd.</i>				1071
	1968-69 . . .	639	323	109	1373
	1969-70 . . .	902	308	83	1636
	1970-71 . . .	1117	453	66	2107
	1971-72 . . .	1468	561	78	2896
	1972-73 . . .	2318	537	43	
3	<i>Garden Reach Works Ltd.</i>				676
	1968-69 . . .	202	229	245	863
	1969-70 . . .	389	130	344	1498
	1970-71 . . .	561	205	732	1701
	1971-72 . . .	597	251	853	1672
	1972-73 . . .	393	247	1032	

TABLE No. 12(1)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)
4	Goa Shipyard Ltd.				
	1968-69	35	36	2	73
	1969-70	37	38	2	77
	1970-71	56	40	3	99
	1971-72	78	36	4	118
	1972-73	72	53	9	134
5	(a) Rajabagan Dockyard.				
	1968-69	11	61	16	88
	1969-70	—	63	18	81
	1970-71	19	60	33	112
	1971-72	Neg.	108	45	153
	1972-73	7	145	95	247
6	(b) Total for all undertakings.				
	1968-69	887	649	372	1903
	1969-70	1328	619	447	2394
	1970-71	1753	758	834	3345
	1971-72	2143	956	980	4079
	1972-73	2790	982	1179	4951

(a) Difference between opening and closing balances for work in progress has not been taken into account.

(b) Excludes HSL.

TABLE No. 12(3)

TIME TAKEN FOR CONSTRUCTION AT DIFFERENT STAGES OF  
SHIP-BUILDING IN ISL (1916-30th June, 1974)

Sl No.	Name of the Ship	Time taken for construction (in months) of the ship			
		DWT	From Keel to Launching	From Launching to delivery	Total Time
1	2	3	4	5	6
1	Walchand . . .	Landing Craft	2.4	2.5	4.9
2	Shanti . . .	Launch	9.0	0.6	9.6
3	Vidyut . . .	Launch	10.0	43.0	53.0
4	Adyar . . .	(a) 242	15.1	20.8	35.9
5	Kutubtari . . .	245	18.8	5.0	23.8
6	RSV Haldia . . .	360	42.8	9.5	52.3
7	Dhruval . . .	(a) 500	29.6	16.0	45.6
8	Darshak . . .	611	24.6	61.9	86.5
9	T. S. Rajendra . . .	946	18.1	10.2	28.3
10	Andamans . . .	4000	11.5	16.8	27.8
11	Jayalakshmi . . .	5000	20.0	9.2	29.2
12	Jagmitra . . .	5000	10.2	11.2	21.4
13	Indian Industry . . .	6000	12.2	11.5	23.7
14	Jalvilar . . .	7000	12.5	10.2	22.7
15	Jalvijaya . . .	7000	17.9	9.1	27.0
16	Jalavikram . . .	7000	15.4	7.9	23.3
17	Jalaveera . . .	7000	15.6	0.1	23.7
18	Jalavishnu . . .	7000	22.5	6.7	29.2

TABLE 12(5)—Contd.

1	2	3	4	5	6
19	Bharatmitra . . .	8000	5.9	3.2	9.1
20	Jalpusipa . . .	8000	6.4	3.3	9.7
21	Jalapadma . . .	8000	7.6	4.1	11.7
22	Jagrani . . .	8000	7.2	5.8	13.0
23	Jalapalka . . .	8000	11.0	3.2	14.2
24	Jalapankhi . . .	8000	10.9	3.9	14.8
25	Jalaprasap . . .	8000	9.6	5.4	15.0
26	Jalaprakashi . . .	8000	11.4	4.4	18.8
27	Jalaprabha . . .	8000	14.9	4.6	19.5
28	Bharatmitra . . .	8000	13.2	10.6	23.8
29	State of Orissa . . .	8000	14.3	10.5	24.8
30	Jalpusipa . . .	8000	15.6	9.3	24.9
31	State of Kutch . . .	8000	18.9	7.9	26.8
32	Jalansha . . .	8000	20.7	7.4	28.1
33	State of Uttar Pradesh . . .	9500	11.9	12.5	27.4
34	State of Rajasthan . . .	9500	15.2	12.6	27.8
35	Vishva Nidhi . . .	9500	15.8	12.8	28.6
36	State of Punjab . . .	12300	16.5	11.7	28.2
37	Vishva Mangal . . .	12300	15.4	15.2	28.6
38	Vishva Prem . . .	12300	15.8	13.3	29.1
39	Vishva Maya . . .	12300	18.5	12.8	31.3
40	Vishva Shanti . . .	12300	21.9	11.6	33.5
41	State of Madhya Pradesh . . .	12669	21.2	18.6	39.8
42	Vishva Tilak . . .	12682	23.7	11.2	34.9
43	Vishva Tej . . .	12682	28.9	12.0	40.9
44	Jala Kala . . .	12709	17.6	19.4	37.0
45	Vishva Bhakti . . .	12733	14.7	9.5	24.2

TABLE No. 12(3)—Contd.

1	2	3	4	5	6
46	Jala Kendra .	12713	22.7	21.4	44.1
47	Vishva Dharma	12852	23.5	6.4	29.9
48	Vishva Vikram	12891	20.1	7.1	27.2
49	Vishva Nayak	12881	17.1	10.7	27.8
50	Vishva Shakti	12900	12.3	8.9	21.2
51	Vishva Darshan	12883	19.1	11.6	30.7
52	Jala Kanta	12912	26.2	13.0	39.2
53	State of West Bengal .	12915	27.0	15.9	42.9
54	State of Mysore	12923	24.9	10.0	34.9
55	Vishva Shobha	12931	19.4	7.6	27.0
56	Vishva Seva	12959	20.1	11.2	31.3
57	Vishva Sidhi	12972	22.7	9.9	32.6
58	Bombay Duch II	Dredg	10.5	8.0	18.5
59	Vishva Bandan . .	137685	...	...	(b) 23.74
60	Vishva Karuna . .	13967	14.2	16.0	30.2
61	Vishva Mamta . .	13971	.	..	(b) 16.10.73
62	Vishva Yash . .	13986	24.0	14.0	38.0

(a) GRT

(b) Date of delivery

TABLE No. 12(4)

# NO. OF INDIAN AND FOREIGN VESSELS REPAIRED AND EARNINGS FROM REPAIRS\* (As on 30th June 1974)

Name of the Undertaking	Indian Vessels		Foreign Vessels	
	No. of vessels	Value (Rs. in lakhs)	No. of Vessels	Value (Rs. in Lakhs)
(1)	(2)	(3)	(4)	(5)
<b>A—WEST COAST Yards</b>				
1. Goa Shipyard Ltd.	86	9.04	13	1.53
2. Mazgaon Dock Ltd. (a)	310	370.21	260	191.00
3. Giovanola—Binny Ltd.	...	...	...	...
4. Shapurji Dock & Steel Co. Pvt. Ltd.	This company does not undertake any outside repairs except for casual repair of their own vessels.			
<b>B—EAST COAST Yards</b>				
5. Hindustan Shipyard Ltd.	75	114.87	11	0.80
6. East Bengal Engineering Works	(Deep Sea Vessels Repairing Division closed on 3-5-1966.)			
7. Binny Ltd. (Engg. Division Madras Works)	73	12.61	21	2.70
8. C. I. W. T. Co. Ltd.	70	38.00	—	—
9. Ching wah & Co.	49	36.41	36	5.04

\* For reporting Undertakings only.

(a) As on 31st March, 1972.

TABLE No. 12(5)

## FIXED ASSETS OF SELECTED PUBLIC SECTOR SHIP-BUILDING UNDERTAKINGS

(Rs. in lakhs)

Assets	Hindustan Shipyard Ltd. 1973-74			Maragon Dock Ltd. 1972-73		
	Gross block at cost	Depreciation so far written off	Net block	Gross block at cost	Depreciation so far written off	Net block
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Land . . . . .	1.42	—	1.42	—	—	—
Buildings docks, ship-ways, roads, railway siding, housing estate etc. . . . .	790.09	192.87	597.22	636.93	63.58	572.75
3. Plant & Machinery . . . . .	667.54	258.91	408.63	579.07	186.92	392.15
4. Furniture & fixtures . . . . .	11.05	5.24	5.81	49.03	9.18	39.85
5. Launches, boats, motor cars, lorries & vans etc. . . . .	19.44	9.53	9.91	109.55	34.01	75.54
6. Live stock . . . . .	—	—	—	—	—	—
7. Monopoly rights . . . . .	—	—	—	—	—	—
8. Assets under construction . . . . .	203.43	—	203.43(a)	1.90	—	1.90
TOTAL . . . . .	1692.97	466.55	1226.42	1375.88	293.69	1082.13

(a) Capital works in progress

TABLE No. 12(5)—Contd.

(Rs. in lakhs)

Assets	Garden Reach Workshop Limited (b) (1972-73)			Central Inland Water Transport Corpn. Ltd. (1972-73)		
	Gross block at cost	Depreciation so far written off	Net block	Gross block at cost	Depreciation so far written off	Net Block
(1)	(8)	(9)	(10)	(11)	(12)	(13)
1. Land . . . . .	9.60	—	9.60	12.30	—	12.30
2. Buildings, docks, slipways, roads, railway siding, housing estate etc.	230.38	55.56	174.82	27.83	5.90	21.93
3. Plant & machinery	610.38	148.58	461.70	65.62	16.49	495.13
4. Furniture & Fixtures	36.58	15.23	21.35	3.56	1.62	1.94
5. Launches, boat, motor cars, lorries & vans etc.	96.20	46.02	50.18	293.73	61.62	232.10
6. Livestock . . . . .	—	—	—	Neg.	—	"Neg.
7. Monopoly lights . . . . .	—	—	—	—	—	—
8. Assets under construction . . . . .	—	—	—	—	—	—
Total . . . . .	983.14	265.49	717.65	403.03	85.63	317.40

(b) Including cost of buildings amounting to Rs. 25.31 lakhs on land belonging to the Govt. of India.



TABLE No. 12 (5)—Contd.

Assets	Total		
	Gross block at cost	Depre- ciation so far written off	Net block
(1)	(17)	(18)	(19)
1. Land . . . . .	42.57	—	42.57
2. Buildings, docks, slipways, roads, railway siding & hous- ing estate etc. . . . .	1707.88	314.62	1393.26
3. Plant & Machinery . . . . .	1907.44	590.22	1317.22
4. Furniture & fixtures . . . . .	109.70	31.88	71.32
5. Launches, boats, motor cars, lorries & vans etc. . . . .	52.20	150.75	369.45
6. Live stock . . . . .	—	—	Neg.
7. Monopoly rights . . . . .	1.77	—	1.77
8. Assets under construction . . . . .	93.54	—	93.54
<b>Total</b>	<b>4376.10</b>	<b>1086.97</b>	<b>3289.13</b>

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**SECTION 13 : MERCHANT NAVY TRAINING**

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TABLE No. 13(1)

## INSTITUTIONS FOR MERCHANT NAVY TRAINING

Category of Personnel	Type of Training/Institution	Name of Ship/Institution	Location/State	Management
(1)	(2)	(3)	(4)	(5)
1. Ratings	Pre-sea Training for services in Deck and Engine Room Departments of Ships	1. Training ship Non Laksh; 2. Training ship Mekhala 3. Training ship Bhandra	Non Lakshi (Gujarat) Vishakapatnam (A P) Calcutta (West Bengal)	C/o India (M/O) Shipping & Transport " "
2. Candidates for grades of professional examinations conducted by M/O Shipping & Transport	Post-sea Institution in Navigation and Engineering	Lal Bahadur Shahstri Naval & Engineering College	Bombay (Maharashtra)	"
3. Cadets		Training ships Rajendra	Bombay (Maharashtra)	"
4. Engineer Apprentices		Directorate of Marine Engineering Training.	Bombay (Maharashtra) Calcutta (West Bengal)	"

TABLE No. 13(2)

## CANDIDATES TRAINED FOR DIFFERENT COURSES DURING THE YEARS 1963-70

Year	Engineering		Executive	
	No of direct entrants	No of trained in DME&T	No of direct entrants	No. trained in T.S. & Rajendran
(1)	(2)	(3)	(4)	(5)
1965	130	92	40	80
1966	191	94	31	79
1967	163	93	63	80
1968	199	95	80	80
1969	240	103	149@	74
1970	287	96	192@	73

@Includes 27 Seamen Ratings who were taken as direct entry apprentices for executive training for one year.

TABLE No. 13(3)

## NO. OF MERCHANT NAVIGATION OFFICERS EMPLOYED ON INDIAN SHIPS (1968 to 1971)

Category	1968	1969	1970	1971
<b>I. Nautical</b>				
1. Master foreign going	404	301	392	298
2. Extra Master (F. G.)	9	—	6	6
3. First Mate (F. G.)	223	145	167	118
4. Second Mate (F. G.)	235	148	206	113
5. Master Home Trade	50	47	43	31
6. Mate Home Trade	32	30	34	17
<b>TOTAL</b>	<b>953</b>	<b>671</b>	<b>848</b>	<b>583</b>
<b>II. Engineers</b>				
1. First Class	306	245	310	220
2. Extra First Class	—	—	—	64
3. Second Class	297	235	288	288
<b>TOTAL</b>	<b>603</b>	<b>500</b>	<b>598</b>	<b>580</b>
<b>III. Uncertified</b>				
1. Nautical cadets	914	189	195	504
2. Eng. cadets		453	390	59
<b>TOTAL</b>	<b>914</b>	<b>636</b>	<b>586</b>	<b>563</b>
<b>GRAND TOTAL</b>	<b>2470</b>	<b>1807</b>	<b>2031</b>	<b>1726</b>

TABLE No. 13(4)

EMPLOYMENT POSITION OF SEAMEN REGISTERED WITH SEAMEN'S  
EMPLOYMENT OFFICES AT BOMBAY & CALCUTTA AND THE NUM-  
BER OF JOBS AS ON 1ST JANUARY

	Foreign going Seaman's			Home Trade Seamen		
	1971	1972	1973	1971	1972	1973
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>I. BOMBAY</b>						
(a) Number of Seamen	28,427	29,164	29,267	1,264	1,180	1,051
(b) Number of jobs	19,077	19,035	18,817	646	670	644
<b>II. CALCUTTA</b>						
(a) Number of Seamen	12,483	12,135	11,754	192	203	214
(b) Number of jobs	7,263	6,444	6,566	110	139	123
<b>III. TOTAL</b>						
(a) Number of Seamen	40,910	41,299	41,021	1,456	1,383	1,275
(b) Number of jobs	26,340	25,479	25,383	756	809	777

TABLE No. 13(5)

**DEPARTMENT-WISE NUMBER OF REGISTERED SEAMEN AND NUMBER  
OF JOBS**  
(1971-1973)

Categories	1971			1972			1973		
	Bombay	Calcutta	Total	Bombay	Calcutta	Total	Bombay	Calcutta	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>1. Deck Department</b>									
(i) Registered	11,443	3,181	15,727	10,225	5,093	15,318	9,937	4,931	14,928
(ii) No. of jobs	6,359	3,079	9,438	6,225	2,839	9,064	5,106	2,816	8,922
<b>2. Engine Department</b>									
(i) Registered	5,708	3,770	9,478	5,297	3,653	8,950	5,239	3,556	8,795
(ii) No. of jobs	3,178	2,014	5,192	3,127	1,765	4,892	3,162	1,663	4,825
<b>3. Saloon Department</b>									
(i) Registered	8,537	3,529	12,086	8,529	3,389	11,918	8,409	3,207	11,116
(ii) No. of jobs	5,738	2,170	7,908	5,615	1,810	7,425	5,407	2,087	7,497
<b>4. General purpose</b>									
(i) Registered	2,719	—	2,719	5,113	—	5,113	5,682	—	5,682
(ii) No. of jobs	3,802	—	3,802	4,068	—	4,068	4,142	—	4,142

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**SECTION 14 : OVERSEAS SHIPPING INDUSTRY**

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## SHIPPING INDUSTRY

Both Coastal and Overseas Shipping are subject to State regulation and assistance. The important Government agencies regulating and assisting the shipping industry are briefly described below :

### (1) Directorate General of Shipping

The Directorate General of Shipping in the Ministry of Shipping and Transport entrusted with the administration of the Indian Merchant Shipping Act, 1958, executes the Government policies on shipping. The important functions of the Directorate include the following :

- (a) Observance of International Conventions relating to maritime matters and measures to ensure the safety of life and ships at sea ;
- (b) Administration of Indian Merchant Shipping laws, and all matters affecting merchant shipping and navigation, such as issue of a general licence, a specified period licence, or a specified voyage licence for the operation of a ship in overseas trade ;
- (c) Development of Indian Shipping Industry and sailing vessels industry and regulation of freight rates in overseas trades ;
- (d) Provision of Merchant Navy training facilities to the officers and ratings regulation of employment of seamen and welfare of seamen ;

The important institutions and offices which work under the direct administrative control of this Directorate are :

- (a) *Training Establishments for Merchant Navy personnel :*
  1. T. S. Dufferin, Bombay.
  2. Training Establishments for ratings at Calcutta, Visakhapatnam and Navalakhi.
  3. Lal Bahadur Shastri Nautical and Engineering College, Bombay.
  4. Directorate of Marine Engineering Training, Calcutta and Bombay.
- (b) *Employment and Welfare of seamen :*
  1. Seamen's Employment Offices, Bombay and Calcutta.
  2. Seamen's Welfare Offices at Bombay, Calcutta and Madras.

3. Offices of the Principal Officer, Mercantile Marine Department, Bombay, Calcutta and Madras
4. Shipping Offices at Bombay and Calcutta.
5. Regional Offices (Sails) at Bombay, Tuticorin, Calicut and Jamnagar.
6. Freight Investigation Bureau with Offices at Madras and Calcutta

## (2) Shipping Development Fund Committee

In March, 1958, under the Merchant Shipping Act, 1958, a statutory non-lapsable fund called the Shipping Development Fund was established by the Central Government to facilitate the growth of Indian tonnage through grants of loans and financial assistance to Indian Shipping Companies for acquisition and maintenance of ships.

The receipts, of Fund, as provided, consists of :

- (a) Grants and loans received from the Central Government.
- (b) Repayment of Indian Companies of the loans taken from the Fund.
- (c) Interest on loans or dividends from investments made from the Fund
- (d) Such other sums as may be received for being credited to the Fund.

The Fund is operated by a Committee known as Shipping Development Fund Committee (SDFC) constituted by the Central Government. The Secretary of the Ministry of Shipping and Transport is the ex-officio Chairman of the Committee, other members being the representatives of the Ministry of Finance and Ministry of Law, Government Director on the Board of Indian Shipping Companies, Director General of Shipping etc

The type of assistance provided by the Committee to various shipping companies is as under :

1. Loans for acquisition of ships.
2. Guarantee in respect of ships acquired under extended terms of payment.
3. (i) Guarantee to pay instalments of deferred portion of price to the sellers/shipyard on behalf of the Indian Shipping Company.
- (ii) Counter-guarantee to pay instalments of deferred portion of price to scheduled Commercial Bank where guarantee to sellers shipyard has been given by such a Bank on behalf of the Indian Shipping Company. Guarantees are issued only when loans are sanctioned.

The quantum of SDFC loan is restricted to 75% of the purchase price in the case of second hand ships, 90% in the case of new ships ordered from abroad and 95% for new ships ordered from Indian yards.

The rate of interest charged on loans granted by SDFC is 8% per annum payable half yearly. If borrower pays the amounts due by the prescribed dates and fulfils all the obligations under the loan agreement and other documents executed in respect of loan, a lower rate of interest is charged.

The period of repayment of SDFC loan for acquisition of second hand ships shall not exceed a prescribed proportion of the residual of the income-tax life of a ship (the life of the ship taken at 20 years). The maximum period of amortisation of loan is prescribed and is generally higher for ships ordered from Indian yards than for ships ordered from foreign yards.

The other important terms and conditions for availing the SDFC assistance are :

- (i) Total cover required to be furnished is 133 1/3 % of the outstanding amount of loan or of the guarantee, if any, issued in respect of the loan, whichever, is higher. The ship in respect of which loan, is sanctioned is to be given in first mortgage to the Committee. The short-fall in security is to be made good by furnishing other acceptable security to the SDFC. Ships offered as security are required to be maintained in highest classification and kept insured both for marine and war risks for an amount to be specified by the SDFC for any higher amount;
- (ii) For Companies with an equity capital of Rs. 10 million or more, the Debt Equity ratio should be 6 : 1 while for companies with an equity capital of less than Rs. 10 million, it should be 4:1; and
- (iii) Companies availing SDFC loans are required to deal exclusively in shipping business and accept nominees of the SDFC on their board of Directors.

### (3) Shipping Coordination Committee

The Shipping Coordination Committee (SCC) in the Ministry of Shipping and Transport serves as a liaison between the shipping interests and industry on the one hand, and the Central, State and other government agencies needing shipping space on the other. The important functions of this Committee are :

- (i) To act as a Clearing House of information on all cargo shipped on Government account with a view to making the most effective use of the available Indian tonnage ;
- (ii) to advise on the best and the most economical shipping arrangement possible for the movement of Government owned cargoes when Indian Shipping is not available i.e., whether non-Indian vessels should be chartered and if so, whether on time basis or voyage basis etc; and

(iii) to coordinate and advise on all policy matters relating to shipping including the development of Indian Shipping

The Chairman and Secretary of the SCC are the Secretary and the Controller of Chartering in the Ministry of Shipping and Transport respectively. Its members are the representatives from the concerned Ministries and Government Organisations, Indian National Shipowners' Association, Shipping Companies etc.

The Shipping Coordination Committee has a Chartering Wing and a Coordination Wing. The Shipping Co-ordination Wing of the Shipping Co-ordination Committee of the Ministry looks after the shipping arrangements for Government cargoes moving in parcels by Conference or non-Conference liners ships including Indian ships. The shipping arrangements for bulk cargoes carried mostly in full ship loads are made by the Chartering Wing of Shipping Co-ordination Committee. The Chartering Wing allots cargoes to Indian ships whenever they are available in position and also arranges shipment by non-Indian vessels when Indian vessels are not available in the required position. Export for the imports under the Food for Peace programme, which are effected in American Ships chartered through the Indian Supply Mission, Washington, the entire shipping and chartering work relating to all cargoes (including food grains) belonging to the Central Government, State Government, Public Sector Projects and Undertakings in the country is carried out by the Shipping Coordination Committee, giving preference to the Indian Shipping Companies.

The Indian Shipping Companies through their liaison officers in Delhi keep contact with the Chief Controller of Chartering in the Ministry of Shipping and Transport regarding availability of cargoes. To minimise the time factor, the Chief Controller of Chartering and his officers might themselves communicate directly with the shipping companies which are likely to be interested in the carriage of cargoes. If any of the Indian shipping companies is in a position to carry these cargoes, the freight rates and terms are negotiated and fixed, except in the case of Conference cargoes, which are carried at the Conference rates and on Conference terms. In respect of open cargoes for which no tariff rates are laid down, special rates are negotiated by the Chief Controller of Chartering with the Conferences.

TABLE No 11(1)

INDIAN OVERSEAS\* CARGO AND PASSENGER TRAFFIC CARRIED  
BY NATIONAL SHIPPING UNDERTAKINGS

(1955-56 to 1972-73)

Year	Cargo traffic carried (in lakh tonnes)			Overseas passenger traffic @ carried (in lakh)
	Imports	Exports	Total	
(1)	(2)	(3)	(4)	(5)
1955-56 . . . . .	6.22	5.46	11.68	.
1960-61 . . . . .	13.04	9.06	22.10	1.33
1961-62 . . . . .	15.77	10.27	26.04	1.31
1962-63 . . . . .	15.54	12.76	28.30	1.29
1963-64 . . . . .	18.14	16.78	34.92	1.19
1964-65 . . . . .	27.66	18.76	46.42	1.22
1965-66 . . . . .	33.92	21.46	55.38	1.13
1966-67 . . . . .	32.92	29.25	62.17	1.13
1967-68 . . . . .	39.06	38.22	77.28	0.99
1968-69 . . . . .	46.79	48.94	95.73	1.03
1969-70 . . . . .	50.21	56.94	107.15	0.75
1970-71 . . . . .	45.74	58.40	104.14	0.75
1971-72 . . . . .	43.66	44.92	88.58	0.74
1972-73 . . . . .	..	...	.	0.75

\*Does not include the cross trades carried by Indian vessels.

@Relate to calendar years (e.g. 1960-61 to be read as 1960).

TABLE No. 14(2)  
**SHARE OF NATIONAL AND FOREIGN SHIPPING UNDERTAKINGS IN  
 INDIA'S OVERSEAS IMPORT/EXPORT CARGO TRAFFIC**  
 (1955-56 to 1971-72)

Year	India's Overseas Cargo traffic (Million tonnes)	Percentage share of		Cargo Imports into India (Million tonnes)
		Indian Gov.	Foreign Cos.	
(1)	(2)	(3)	(4)	(5)
	17.71	6.5	93.5	10.65
1955-56 . . . . .	24.49	9.0	91.0	17.86
1960-61 . . . . .	23.22	11.2	88.8	16.53
1961-62 . . . . .	33.61	8.2	91.8	18.99
1962-63 . . . . .	33.74	10.3	89.7	19.76
1963-64 . . . . .	41.08	11.4	88.6	23.91
1964-65 . . . . .	42.94	12.9	87.1	23.68
1965-66 . . . . .	47.11	13.2	86.8	26.07
1966-67 . . . . .	49.79	15.5	84.5	26.74
1967-68 . . . . .	52.34	18.3	81.7	26.77
1968-69 . . . . .	49.61	21.3	78.7	22.65
1969-70 . . . . .	52.37	19.9	80.1	22.40
1970-71 . . . . .	54.54	16.5	83.5	26.12
1971-72 . . . . .				

NOTES : (1) The overseas traffic figures of India for the year 1964-65 to 1971-72 are inclusive of the traffic of minor and intermediate ports.  
 (2) The overseas traffic figures of India for the years 1965-66 to 1971-72 are exclusive of traffic carried in sailing vessels. Bunker traffic is excluded at all ports excepting Bombay.

TABLE No. 14(2)—Contd.

Year	Percentageshare of		Cargo Exports of India (Million tonnes)	Percentageshare of	
	Indian Companies	Foreign Companies		Indian Companies	Foreign Companies
(1)	(6)	(7)	(8)	(9)	(10)
1955-56 . . .	5.8	94.2	7.05	7.7	92.3
1960-61 . . .	7.3	92.7	6.63	13.6	86.4
1961-62 . . .	9.5	90.5	6.69	15.4	84.6
1962-63 . . .	8.2	91.8	14.62	8.7	91.3
1963-64 . . .	9.2	90.8	13.99	12.0	88.0
1964-65 . . .	11.6	88.4	17.16	11.0	89.0
1965-66 . . .	14.3	85.7	19.25	11.1	88.9
1966-67 . . .	12.6	87.4	21.04	13.9	86.1
1967-68 . . .	14.6	85.4	23.05	16.6	83.4
1968-69 . . .	17.5	82.5	25.57	19.1	80.9
1969-70 . . .	21.7	78.3	26.96	29.1	70.9
1970-71 . . .	20.6	79.4	29.97	19.3	80.7
1971-72 . . .	16.9	83.1	28.42	16.0	84.0

- NOTES : (1) The overseas traffic figures of India for the year 1964-65, to 1971-72 are inclusive of the traffic of minor and intermediate ports.
- (2) The overseas traffic figures of India for the years 1965-66 to 1971-72 are exclusive of traffic carried in sailing vessels. Bunker traffic is excluded at all ports excepting Bombay.

TABLE No. 14(3)

**SHARE OF NATIONAL VESSELS IN THE GOVERNMENT OVERSEAS  
BULK CARGO CARRIED IN CHARTERED VESSELS AND  
GENERAL CARGO CARRIED IN LINER VESSELS  
(1960-1972)**

(In '000 tonnes)

Calendar year	Under the arrangements made by Shipping Coordination Wing		Under the arrangements made by Chartering Wing		Total cargo handled (2) + (4) (Tonnes)	Share of Indian Vessels (Tonnes)	Share of Indian vessels (%)
	General liner Cargo		Cargo in bulk and ship-loads by chartered vessels				
	Total tonnage	Carried by Indian ships (in tonnes)	Total tonnage	Carried by Indian ships (in tonnes)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1960	751	155	442	4	1193	159	13.3
1961	479	241	468	172	947	413	43.6
1962	174	105	688	224	862	329	38.2
1963	323	203	538	192	861	395	45.9
1964	314	294	2482	412	2996	706	23.6
1965	416	230	6028	769	6444	999	15.5
1966	234	139	8927	1266	9161	1405	15.3
1967	473	291	8728	1293	9201	1584	17.2
1968	375	223	6364	1253	6739	1476	21.9
1969	403	243	4553	1517	4961	1765	35.6
1970	468	273	3831	1340	4299	1613	37.8
1971	978	600	5284	1471	6262	2071	33.1
1972	1410	800	5905	1206	7315	2006	27.4



TABLE No. 14(4)  
SHARES OF PUBLIC AND PRIVATE SECTOR UNDERTAKINGS IN  
THE OVERSEAS SHIPPING INDUSTRY (AS ON 30.6.1973)

Type of Trade in which engaged	No. of Indian Undertakings			No. of Overseas Ships			Total Overseas GRT (in '000)			Overseas Earnings (Rs. in Lakhs)*		
	Total			Total			Total			Total		
	Pub- lic	Pri- vate	Sec- tor	Pub- lic	Pri- vate	Sec- tor	Pub- lic	Pri- vate	Sec- tor	Pub- lic	Pri- vate	Sec- tor
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Overseas Trade	8	—	8	24	—	4	361	—	361	1340	—	1340
Both Overseas and Coastal Trade	14	2	12	179	89	90	2171	1159	1012	16140	6610	9530
TOTAL	22	2	20	203	89	114	2532	1159	1373	17480	6610	10870

\*The figures relate to 1971-72-

TABLE NO. 14(5)

# SHAJWTH IN NUMBER AND TONNAGE OF OVERSEAS FLEET OF INDIA (1951-1973)

(As on 31st December)	No. of vessels	Total tonnage (in '000 GRT)
(1)	(2)	(3)
1951 . . . . .	24	174
1956 . . . . .	39	271
1961 . . . . .	70	539
1966 . . . . .	138	1,462
1967 . . . . .	150	1,593
1968 . . . . .	169	1,746
1969 . . . . .	184	2,001
1970 . . . . .	181	2,147
1971 . . . . .	193	2,282
1972 . . . . .	199	2,416
1973 (30th June) . . . . .	203	2,532

TABLE No. 14(6)

DISTRIBUTION OF NUMBER AND TONNAGE OF ALL OVERSEAS  
FLEET BY TYPE AND SIZE OF VESSELS

(As on 30-6-1973.)

(GRT in '000)

Type	Size Group (in tonnes)	100—999		1000—4999		5000—999		10000—19999	
		No.	GRT	No.	GRT	No.	GRT	No.	GRT
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Cargo Liners	.	—	—	11	54	100	850	15	171
Bulk Carriers	.	—	—	—	—	—	—	—	—
Small Tramps	.	—	—	1	2	14	107	13	151
Tankers	.	—	—	—	—	—	—	2	24
Ore, Oil Bulk Carriers	.	—	—	—	—	—	—	5	77
Passenger-cum-cargo	.	—	—	—	—	4	30	1	18
All Types	.	—	—	12	36	118	987	36	441

TABLE No. 14(6)—Contd.

Type	Size Group (in tonnes)	20000-39999		40000 & above		Total		Size (GRT in '000)
		No.	GRT	No.	GRT	No.	GRT	
(1)		(10)	(11)	(12)	(13)	(14)	(15)	
Cargo Liners		—	—	1	58	127	1113	
Bulk Carriers		26	638	—	—	26	637	
Small Tramps		—	—	—	—	28	260	
Tankers		5	140	2	95	9	259	
Ore, Oil Bulk Carriers		—	—	3	137	8	215	
Passenger-cum-cargo		—	—	—	—	5	48	
All Types		31	778	6	290	203	2,532	

TABLE No. 14(7)

DISTRIBUTION OF NUMBER AND TONNAGE OF VESSELS  
IN THE OVERSEAS FLEET OF INDIA BY TYPE AND AGE  
(As on 30-6-1973)

(GRT in '000)

Type	Age Group	Upto 2 years		3-5 years		6-10 years		11-15 years	
		No.	GRT	No.	GRT	No.	GRT	No.	GRT
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Large Liners		16	204	15	139	23	233	36	284
Bulk Carriers		1	56	5	119	19	440	—	—
Small Tramps		2	22	4	45	5	55	8	81
Tankers		—	—	3	106	4	120	1	13
Ore, Oil Bulk Carriers		1	46	2	92	3	46	1	12
Passenger-cum-cargo		1	7	—	—	1	18	—	—
TOTAL		21	335	29	501	55	912	46	390

TABLE No. 14(7)—Contd.

		(GRT in '000)					
Age groups		16—20 years		Over 20 years		All Ships	
Type		No.	GRT	No.	GRT	No.	GRT
(1)		(10)	(11)	(12)	(13)	(14)	(15)
Cargo Liners . . .		32	218	5	35	127	1,113
Bulk Carriers . . .		1	23	—	—	26	637
Small Tramps . . .		9	56	—	—	28	280
Tankers . . . . .		1	20	—	—	9	253
Ore Oil Bulk Carriers		1	18	—	—	8	215
Passenger-cum-cargo .		—	—	3	23	5	45
TOTAL:		44	335	8	58	203	2,553

TABLE No 14(8)

**DISTRIBUTION OF NUMBER AND TONNAGE OF VESSELS  
IN THE OVERSEAS FLEET OF INDIA BY SIZE AND AGE**  
(As on 30-6-1973)

(GRT in '000)

Size	Age Group	upto 2 yrs.		3-5 years		6-10 years		11-15 years	
		No.	GRT	No.	GRT	No.	GRT	No.	GRT
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
100— 999	. .	—	—	—	—	—	—	—	—
1000— 4999	. .	—	—	—	—	—	—	4	12
5000— 9999	. .	13	122	16	146	15	138	33	274
10000—19999	. .	5	54	4	50	17	214	9	104
20000—39999	. .	1	55	5	119	23	560	—	—
40000 & above	. .	2	104	4	186	—	—	—	—
TOTAL		21	335	29	501	55	912	46	390

TABLE No. 14(8)—Contd.

Age Group Size	16-20 years		Over 20 years		All Ships	
	No.	GRT	No.	GRT	No.	GRT
(1)	(10)	(11)	(12)	(13)	(14)	(15)
100— 999	—	—	—	—	—	—
1000— 4999	7	19	1	5	12	36
5000— 9999	34	255	7	53	118	987
10000— 19999	1	18	—	—	36	441
20000— 39999	2	43	—	—	31	778
40000 & above	—	—	—	—	6	290
Total	44	335	8	58	203	2532



TABLE No. 14(9)

GROWTH IN NUMBER AND TONNAGE OF DIFFERENT TYPES OF  
VESSELS IN THE OVERSEAS FLEET OF INDIA  
(GRT in Lakhs)

Ship-type	1961		1966		1971	
	No.	GRT	No.	GRT	No.	GRT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dry Cargo Liners .	60	4.23	76	5.82	111	8.97
Small Tramps . .	14	0.99	20	1.50	28	2.51
Bulk Carriers . .	—	—	16	3.36	32	7.84
Tankers . . . .	—	—	4	1.06	7	2.35
Passenger-cum-cargo .	6	0.43	6	0.43	5	0.37
All types of Vessels .	60	5.65	122	12.17	103	22.04

TABLE No. 14(9)—Contd

(GRT in Lakhs)

Ship-type	1972		1973		30-6-1973	
	No.	GRT	No.	GRT	No.	GRT
(1)	(8)	(9)	(10)	(11)	(12)	(13)
Dry Cargo Liners	119	9.61	124	10.33	127	11.13
Small Tramps	30	2.68	29	2.68	28	2.60
Bulk Carriers	32	7.84	33	8.39	34	8.52
Tankers	8	2.46	9	2.59	9	2.59
Passenger-cum-cargo	6	0.44	6	0.54	5	0.48
All types of vessels	195	23.03	201	24.53	203	25.32

NOTE:—Figures for 1961, 1966, 1971 to 1973 are as on 1st April.

TABLE No. 14(10)  
COMPANY-WISE TONNAGE UNDER CONSTRUCTION AS  
ON 1-1-1973 (GRT in lakhs)

Name of the Company	Coastal		Overseas		Total	
	No.	GRT	No.	GRT	No.	GRT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
(A) Public Sector						
S. G. I.	8	0.93	34	9.62	42	10.55
Mogul Line	—	—	5	0.48	5	0.48
Total Public Sector	8	0.93	39	10.10	47	11.03
(b) Private Sector						
Scindia	—	—	3	1.32	3	1.32
India Steamships	—	—	2	0.20	3	0.20
Great Eastern	—	—	5	0.67	5	0.67
Chowgule	—	—	2	0.44	2	0.44
Damodar	—	—	2	0.44	2	0.44
Dempo	—	—	2	0.56	2	0.56
Ratnakar	—	—	3	0.35	2	0.35
Total Private Sector	—	—	19	3.98	19	3.9
Grand Total	8	0.93	58	14.08	66	15.01

TABLE No.14(11)

**TYPE-WISE INDIAN SHIPS UNDER CONSTRUCTION IN INDIAN AND FOREIGN  
SHIP-YARDS AS ON 1-1-1973**

(GRT in lakhs)

Type of ships	Indian Shipyards				Foreign Shipyards				Total			
	Coastal		Overseas		Coastal		Overseas		Coastal		Overseas	
	No.	GRT	No.	GRT	No.	GRT	No.	GRT	No.	GRT	No.	GRT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Liners	—	—	7	0.69	—	—	10	0.92	—	—	17	1.61
Bulk Carriers	—	—	—	—	—	—	8	3.66	—	—	8	3.66
Oil/Bulk Carriers	—	—	—	—	—	—	3	2.01	—	—	3	2.01
Tramps	—	—	8	1.04	—	—	11	1.07	—	—	19	2.11
Tankers	—	—	—	—	8	0.93	9	4.52	8	0.93	9	4.52
Passenger-cum-cargo	—	—	2	0.18	—	—	—	—	—	—	2	0.18
	—	—	17	1.91	8	0.93	41	12.18	8	0.93	58	14.09

TABLE No. 14(12)

# **SCHEDULED OVERSEAS ROUTES FROM INDIA, FREIGHT AGREEMENT AND CONFERENCES AND INDIAN MEMBER LINES**

Scheduled Overseas Trade Routes from India	Shipping Lines, Conferences Rate Agreement, thereof	Indian Member Lines
(1)	(2)	(3)
<b>(A) India/Overseas</b>		
1. India/U.S. Pacific	Pacific-India-Pakistan/ Burma-Ceylon/Freight Rate Agreement. Members American President Lines. Nedlloyd & Hoogh Lines. American Mail Line. American Export Line. Isbrandtsen Lines.	1. Scindia. 2. S.C.I.
2. India/Sri-Lanka, Bangladesh & Burma	India/Sri-Lanka, Bangla Desh, Burma Conference	1. Africana 2. Collis Line 3. Hind Shipping 4. India Steamship 5. Damodar 6. Kerala 7. Malabar 8. Merchant Steam 9. Mogul Line 10. R. A. J. Lines 11. Ratnakar 12. Scindia 13. S. C. I. 14. S. E. Asia 15. South India 16. Thakur 17. Tolani 18. Pent Ocean

TABLE No. 14(12)—Contd.

(1)	(2)	(3)
3. India/Middle East	India/Pakistan/Middle East Conference.	1. S.C.I. 2. Scindia 3. India Steamship
4. India/Poland	Indo-Polish Shipping Service	1. S. C. I. 2. Scindia 3. India Steamship
5. India/USSR and Black Sea	Indo-Soviet Shipping Service	1. S.C.I. 2. Scindia 3. India Steamship
(B) West Coast/Overseas		
6. West Coast of India/ West Asia (Gulf) Ports.	Bombay-West Coast & India/ West Asia (Gulf) Conference.	1. S.C.I. 2. Scindia 3. Damodar 4. Cullis Line 5. South East Asia 6. India Steamship 7. R.A.J. Liner
7. West Coast of India (Including Tuticaurin/U.S.A. & Gulf of Mexico Ports.)	West Coast of India and Pakistan/U.S.A. Conference	1. S.C.I. 2. Scindia
West Coast of India/ Ports in Mexico Central & South America and Islands in Caribbean Sea.	West Coast of India & Pakistan/USA Conference.	1. S.C.I. 2. Scindia.
9. Malabar Coast/ U.K. Continent	1. Malabar Coast, U.K. and Fire Conference. 2. Malabar Coast Continent Conference.	1. S.C.I. 2. Scindia 3. India Steamship  1. S.C.I. 2. Scindia 3. India Steamship

TABLE No. 14(12)—Contd.

(1)	(2)	(3)
10. Malabar/Canadian Atlantic Ports.	Ellerman and Buchwell Steamship Co. Ltd.	1. S.C.I. 2. Scindia 3. M/s Aspin Wall & Co. Ltd.
11. Malabar/New Zealand	British India Steam Nav. Co. Ltd., Union Steam Nav. Co. of New Zealand.	
12. Malabar/Far East and East Asia.	Malabar Far East/Rate Agreement.	S.C.I.
13. Malabar/Australian Mainports	Malabar Far East/Rate Agreement.	S.C.I.
14. Bombay/Aden and Red Sea Ports.	Bombay/Aden and Red Sea Service.	Mogul Line
15. Bombay and South Africa/East Africa	1. British India Nav. Co., Ltd. 2. S.C.I.	S.C.I.
16. Bombay/Mauritius	Shipping Corporation of India and Scandinavian Shipping Service.	S.C.I.
17. Bombay/West Africa.	1. Mitsui O.S.K. Lines (with transshipment Singapore) 2. M/s. Mafek Lines (with transshipment at Hongkong). 3. Jadrenska Slobodna Plovidba	S.C.I.  S. C. I.
18. Bombay/U.K. Continent	Karmahom Conference	1. S.C.I. 2. Scindia. 3. India Steamship

TABLE No. 14(12)—Contd.

(1)	(2)	(3)
19. Bombay/Canadian Atlantic Ports.	1. Ellerman & Buckwell Scindia Steamship Co. Ltd. 2. Nedlloyd Hooch Lines Services.	
20. Bombay/West Coast of South America	1. Nedlloyd Hooch Lines	S. C. I.
21. Bombay/Mangalore & Saurashtra Ports/Australian Ports.	Bombay/Agreement Australia Rate	
22. Bombay/Saurashtra Ports/New Zealand	1. British India Steam Nav. Co. Ltd., 2. New Zealand P&O Steam Nav. Co. Ltd.	S. C. I.
23. Bombay, Saurashtra Ports and Tuticorin & Mangalore/Bangkok, Saigon Phnom Penh, Malaysia, Formosa, South Korea, Philippines & Indonesia	Gulf Arabian Sea Orient Rate Agreement	S. C. I.
24. Bombay/Saurashtra/Marmugao/Madras/Japan/Hongkong	Japan/India-Pakistan/Persian Gulf/Japan Conference.	S. C. I.
25. Tuticorin/U. K. Continent	Tuticorin Homeward Conference.	1. S. C. I. 2. Scindia 3. India Steamship



(1)	(2)	(3)
<b>C. East Coast Overseas</b>		
26. Madras, Pondicherry/ U. K. Continent	1. (a) Madras Homeward Freight Conference.  (b) Madras and Pondicherry U. K. & Eire Continental Conference. 2. Madras and Pondicherry Continental Conference. 3. Madras Coast U.K. Eire Conference. 4. Madras Coast Conti- nental Conference.	1. S.C.I. 2. Scindia 3. India Steam- ship.
27. Madras/West Africa	Elder Dempster Lines.	
28. Madras, Kakinada and Vishakapatnam/ Canada	Ellerman & Buck Wall Steamship Co. Ltd.	1. S.C.I. 2. Scindia
29. Madras, Naga- patnam/Straits Ports.	S.C.I. and British India Steam Navigation Co. Join Service	S.C.I.
30. Vishakapatnam/ U. K.	1. Vishakapatnam U.K. Eire Conference. 2. Vishakapatnam Continental Conference	1. S.C.I. 2. Scindia. 3. India Steamship.
31. Calcutta/U.K. Continent	1. Calcutta Lines Conference 2. Calcutta Continental Conference	1. S.C.I. 2. Scindia 3. India Steamship.

TABLE No. 14(12)—Contd.

(1)	(2)	(3)
32. Calcutta/Aden and Sea Ports.	Aden & Red Sea Freight Rate Agreement.	1. S.C.I. 2. Scindia 3. India Steamship Scindia
33. Calcutta and Cochin/ Vera Cruz (Mexico) Barbados (Bridgetown) Port of Spain (Trinidad)	Scindia	Scindia
34. Calcutta/East Africa	Bank Line Ltd.	—
35. Calcutta/West Africa	Eldar Dampster Line Ltd.	Scindia
36. Calcutta/East Coast of India Ports and Bangladesh/USA Atlantic & Gulf of Mexico Ports.	Calcutta & East Coast of India Bangladesh/USA Conference.	1. Scindia 2. S.C.I.
37. Calcutta/Canada	1. M/s. Ellerman & Bucknall Steamship Co. Ltd. 2. Canadian City Lines Ltd.	1. S.C.I.
38. Calcutta/River Plate Brazil Service.	Bank Line Limited	—
39. Calcutta/Mexico, Panama and Caribbean Ports	Nedlloyd Line	—
40. Calcutta/West Coast of South America	Bank Line	—
41. Bay of Bengal/Philippines	Bay of Bengal/Philippines Agreement.	Scindia
42. Calcutta/Visakhapatnam Kakinada/South East Asia and Far-East Destinations.	Bay of Bengal/Japan/Bay of Bengal Conference	S.C.I.

TABLE No. 14(12)—Contd.

(1)	(2)	(3)
13. East Coast of India/New Zealand	1. British India Steam Nav. Co. Limited.	—
	2. Union Steamship Co. Ltd. of New Zealand.	—
14. East Coast of India/Australian Main Ports.	Calcutta/Australia Conference.	S.C.I.
15. East Coast of India/West Asia (Gulf) Ports	East Coast of India/West Asia (Gulf) Conference.	1. S.C.I. 2. R. A. I. Lines 3. Damodar 4. Scindia 5. India Steamship 6. South East Asia 7. Malabar
16. Calcutta, East Coast of India Ports and Bangladesh/Ports in Mexico Central and South America and Island in the Caribbean Sea	Calcutta and East Coast of India and Bangladesh/USA Conference.	1. S.C.I. 2. Scindia

**Table No. 14(13)**  
**CHIT RATES FOR SELECTED EXPORT COMMODITIES OF INDIA FOR VARIOUS OVERSEAS DESTINATIONS (For Calcutta as on 17th May, '74 and for Bombay as on 1st June, '74 (in U. S. \$))**

Commodity	Port of Origin in India	Overseas Destinations	Unit	Freight Rates
(1)	(2)	(3)	(4)	(5)
Jute Webbing	Calcutta	U.K. Port/London/Liverpool/Dundee/Glasgow).	Cu.M.	20.5*
	Calcutta	New York (U.S.A.) Atlantic ports .	Cu.M.	30.25**
	Calcutta	U. K. Ports (London/Liverpool/Dundee/Glasgow).	Cu.M.	33.55*
Gunnies	Calcutta	New York (U.S.A.)	100Kg.	46.00*
	Calcutta	New York (U.S.A.)	Cu.M.	46.00**
	Calcutta	New York (U. S. A.)	100Kg.	—
	Calcutta	Australia	100Kg.	—
	Calcutta	Australia	Cu.M.	—
	Calcutta	U. K. Ports (London/Liverpool/Dundee/Glasgow)	Cu.M.	33.50*
Tea	Calcutta	U.K. Ports (London/Liverpool/Dundee/Glasgow)	Cu.M.	33.50*
Shellac	Calcutta	U.K. Ports (London/Liverpool/Dundee/Glasgow)	Cu.M.	(to cases)

TABLE No. 14(13)—Contd.

(1)	(2)	(3)	(4)	(5)
	Calcutta	U. K. Ports (London/Liverpool/Glasgow)	1000Kg. (in bags)	60.25*
	Bombay	U.K. basis Ports (a)	1000Kg.	49.55
	Bombay	Sydney, Melbourne and Fremantle (Australia) (b)	1000Kg.	37.80
Linseed		U.K./Continent basis Ports	Gu.M.	37.95
Cotton, raw and Cotton Pickings	Bombay	U.K./Continent basis ports (a)	1000Kg.	—
Castor Seed	Bombay	U.K./Continent basis ports (a)	1000Kg.	45.80 nett
Castor Seed (12 Cwts. Cargo Small).	Bombay	Sydney, Melbourne and Fremantle (Australia) (b)	1000Kg.	54.55 nett
Castor Seed (10 Cwts. Cargo bolt)	Bombay	Sydney, Melbourne and Fremantle (Australia) (b)	1000Kg.	40.90 nett.
Groundnut Kernel	Bombay	Australia (b)	1000Kg.	65.65
Groundnut with Shell in bag.	Bombay	U. K./Continent basis ports (a)	1000Kg.	39.15
Groundnut Kernel in bags	Bombay	U. K./Continent basis ports (a)	1000Kg.	39.15

TABLE NO. 14(13)—Contd.

(1)	(2)	(3)	(4)
Groundnut Kernel Bombay in cases.	U. K./Continent basls ports (a)	Cu.M.	33.55
Vegetable Oils (Crude in Drums)	U. K./Continent basls ports (a)	1000Kg.	47.40
(i) Groundnut oil, Bombay Castor Oil & Linseed packed in drums	Australia (c)	Cu.M.	41.50 net
(ii) Oil-castor, Linc- seed, Mustard Hydrogenated groundnut oil, groundnut dehy- drummed dehy- drated, Castor Oil, Tatty Acid, Com- mercial Castor Oil, B.S.S. Oil and Medicinal Castor Oil.	U.S. Atlantic (d)	Cu.M. 1000Kg.	98.50 } Com- of tract. 110.25 }
(iii) Groundnut oil Bombay in drums	U.S. Atlantic (d)	Cu.M. 1000Kg.	55.00 } Com- of tract. 74.00 }
iv) Castor oil in Bombay drums.			

TABLE No. 14(13)—Contd.

(1)	(2)	(3)	(4)	(5)
(v) Castor oil, Cotton, Limesced and seed Sesame in drums	Bombay	U.S. Pacific		70.75 net
Hides, Tanned and Dried	Bombay	U. S. Atlantic New York/Boston/Philade- lphia (d)	1000Kg.	193.25 Contract
Goat Skins (in bales)	Bombay	New York/Boston/Philadelphia	Cu.M.	70.00 Contract
Sheep Skins (in bale)	Bombay	New York/Boston/Philadelphia	Cu.M.	87.75 Contract

Notes.—Freight Rates for Calcutta are from Bengal Chamber of Commerce and Industry.  
Freight Rates for Bombay are from Freight Investigation Bureau, Bombay.

\*The above rates are subject to :

- (1) London Port handling charges £1.75 per cu. m /1000 Kq;
2. congestion surcharges : Avonmouth 20%, Liverpool 2%
3. Dollar devaluation Surcharges of 11 11%
4. Suez Surcharge 13% Rebate 10% deferred to 9½% immediate on the base rate.
5. Bunker Surcharge of 20%

\*\*The above rates are subject to Bunker Surcharge of 22.15 per 1000 Kg or \$19.85 per cu. M plus  
suez surcharge of 12½%

(a) All rates to U.K./Continent basis ports are gross, i.e., subject to 10 % deferred rebate or 9.5% immediate rebate on contract. The rates to U.K./Continent are also Subject to 13.5% Suez Surcharge, 1.25% CAF (currency adjustment factor) to UK Ports and 11.11% CAF to continental Ports and a

Bunker Surcharge of 19.50%. Shipments to Avonmouth would attract a Surcharge of 20% effective from 29.10.73 payable by party paying freight and to Liverpool/Birkenhead would attract a surcharge of 25% payable by party paying freight effective from 25.2.74. Shipments to London would attract an additional of £ 1.73 net per 1000 Kgs./Cu.M. payable by receiver prior to release of cargo.

(b) The rates to Australia are subject to CAF (currency adjustment factor) of 11.11% plus 10% Bom. Bunker surcharge.

(c) The rates to Australia are subject to CAF (currency adjustment factor) of 11.11% plus 10% Bom. Bunker Surcharge.

(d) The rates to U.S.—Atlantic Ports are subject to 12.5% Suez Surcharge and bunker fuel surcharge of \$23.60 per 1000 Kgs.

Source.—Indian Trade Journal—July 31, 1974. Govt. of India, Deptt. of Commercial Intelligence and Statistics, Calcutta.



TABLE No. 14(14)

EARNINGS OF PUBLIC AND PRIVATE SECTOR SHIPPING FROM OVERSEAS TRADE

FREIGHTS AND CHARTER-HIRES

(1970-71 to 1971-72)

(In '000 Rs.)

	1970-71			1971-72		
	Public Sector	Private Sector*	Total	Public Sector	Private Sector	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Freight on cargo	603170	849010	1452994	690412	898209	1597621
Passenger fares	23163	57	23222	17563	98	17661
Charter hires	142313	60614	202927	63535	69134	132669
Total	770556	910437	1681143	780510	967441	1747951

\* Includes Jayanti Shipping Co. which is a Private Company managed by a Public Sector Undertaking viz. Shipping Corporation of India Ltd.

TABLE No.14(15)  
**GROWTH OF INDIA'S OVERSEAS TRAFFIC EARNINGS**  
**FROM NATIONAL SHIPPING**  
 (1955-56 to 1971-72)  
 (Rs. in Crores)

Year	Freight	Fare	Total
(1)	(2)	(3)	(4)
1955-56 . . . . .	—	—	13.42
1956-57 . . . . .	—	—	17.45
1957-58 . . . . .	—	—	20.89
1958-59 . . . . .	—	—	24.05
1959-60 . . . . .	—	—	25.77
1960-61 . . . . .	—	—	30.29
1961-62 . . . . .	—	—	31.66
1962-63 . . . . .	—	—	34.29
1963-64 . . . . .	—	—	43.13
1964-65 . . . . .	—	—	51.36
1965-66 . . . . .	53.44	2.22	55.66
1966-67 . . . . .	90.27	2.64	92.91
1967-68 . . . . .	105.81	2.69	108.50
1968-69 . . . . .	118.90	2.47	121.37
1969-70 . . . . .	128.78	1.74	130.52
1970-71 . . . . .	165.59	2.52	168.11
1971-72 . . . . .	173.03	1.77	174.80

TABLE No. 14(16)

**TREND OF EXPENDITURE ON REPAIRS TO INDIAN VESSELS  
INCURRED IN INDIAN AND FOREIGN SHIPYARDS  
(1963-64 to 1971-72)**

Year	No. of ships including those with repeated repairs	Repairs Expendi- ture in Indian yards (Rs. lakhs)	Repairs Expendi- ture in foreign yards (Rs. lakhs)
(1)	(2)	(3)	(4)
1963-64 . . . . .	—	—	49
1964-65 . . . . .	—	—	182
1965-66 . . . . .	—	—	25
1966-67 . . . . .	—	—	212
1968-69 . . . . .	1393	686	315
1969-70 . . . . .	1525	643	303
1970-71 . . . . .	—	709	402
1971-72 . . . . .	—	—	804

Note.—The figures under col. 4 represent the amounts recommended by the DG Shipping to the Reserve Bank of India for release of foreign exchange.

TABLE No. 14(17)

# FUEL CONSUMPTION RATES IN PORT AND AT SEA FOR THE INDIVIDUAL OVERSEAS VESSELS OF INDIAN SHIPPING UNDERTAKINGS DURING 1972

Sl. No.	Name of the Co./Vessel	Year of Built	Year of Purchase	Size of Vessels		Rates of consumption of fuel per day of 24 hours (in tonnes)			
				GRT (Tonnes)	NRT (Tonnes)	At port when not sailing		At sea when sailing	
						F.O.	D.O.	F.O.	D.O.
1	2	3	4	5	6	7	8	9	10
<b>PUBLIC SECTOR</b>									
<b>I. S. C. I. ③</b>									
1.	M. V. Vishva Darshan	1971	...	9260	5121	0.15	3.75	29.39	2.54
		1970	1970	9262	9122	—	3.71	28.85	2.35
2.	M. V. Vishva Vikram	1970	1970	9335	5098	0.57	4.29	27.71	3.88
3.	M. V. Vishva Dharm	1969	1969	8121	4427	—	2.72	22.50	2.84
4.	M. V. Vishva Bindu	1969	1969	9336	5098	—	3.58	30.38	2.45
5.	M. V. Vishva Shakti	1969	1969	9337	5099	—	2.86	31.03	3.07
6.	M. V. Vishva Shobha	1969	1969	8119	4449	—	2.83	24.34	2.90
7.	M. V. Vishva Chetna	1969	1969	8119	4449	—	2.51	24.10	2.73
8.	M. V. Vishva Sandesh	1969	1969	8332	5103	0.15	2.57	26.32	2.52
9.	M. V. Vishva Bhakti	1968	1968	8422	4756	—	2.45	22.02	2.72
10.	M. V. Vishva Vikas								

TABLE No. 14(17)—Contd.

	1	2	3	4	5	6	7	8	9	10
								4.17	26.76	3.05
11. M. V. Vishva Siddhi	1968			1968	9330	5103	—	1.18	23.81	2.59
12. M. V. Vishva Seva	1968			1968	9360	5260	—	—	—	1.18 (G.O.)
13. M. V. Vishva Tirth	1967			1967	9360	5265	—	2.93	21.13	4.22
14. M. V. Vishva Toj	1967			1967	9367	5269	0.17	1.63	22.89	0.37
15. M. V. State of Mysore	1966			1966	9371	5309	0.20	1.77	23.34	1.69
16. M. V. Vishva Raksha	1966			1966	8956	4861	—	3.52	19.30	3.54
17. M. V. Vishva Vibhuti	1966			1966	8959	4866	—	4.02	21.61	2.31
18. M. V. Vishva Kalyan	1966			1966	8955	4867	—	2.65	19.61	3.50
19. M. V. State of W. Bengal	1965			1965	9373	5319	0.17	1.94	23.53	1.55
20. M. V. Vishva Mahima	1965			1965	8956	4901	—	2.90	22.79	2.75
21. M. V. S/O Madhya Pradesh	1965			1965	9376	5397	—	2.30	23.42	2.21
22. M. V. Vishva Mangal	1963			1963	9165	5091	0.30	3.19	19.78	3.09
23. M. V. Vishva Maya	1963			1963	9150	5082	0.20	1.92	22.81	3.33
24. M. V. Vishva Prem	1962			1963	9150	5082	—	3.22	24.36	2.49
25. M. V. State of Punjab	1962			1962	9191	5135	—	2.87	29.52	1.89
26. M. V. Vishva Nidhi	1961			1961	6209	3274	0.25	1.64	22.81	3.67
27. M. V. S/O Rajasthan	1961			1961	6209	3241	—	2.75	26.29	2.31
28. M. V. S/O Uttar Pradesh	1960			1961	6209	3274	0.66	1.88	23.13	4.58

TABLE No. 14(17)—Contd.

	3	4	5	6	7	8	9	10
29. M. V. Vishva Kirti	1960	1960	9167	5111	—	1.93	23.30	2.83
30. M. V. Vishva Usha	1960	1960	9186	6222	—	1.17	14.75	2.15 1.26 G.O.
31. M. V. Vishva Prabha	1959	1959	9457	5586	0.16	1.93	18.22	1.36
32. M. V. Vishva Jyoti	1959	1959	9173	5108	—	2.47	23.86	1.83
33. M. V. Vishva Vivek	1959	1968	10843	6050	—	2.02	20.15	1.82
34. M. V. Vishva Vandana	1959	1968	10441	6103	—	1.61	14.92	2.20
35. M. V. Vishva Sudha	1958	1962	10350	7619	—	1.58	18.23	1.60
36. M. V. Vishva Marg	1958	1968	2356	1374	—	0.13	—	3.75 0.44 G.O.
37. M. V. Vishva Vinay	1958	1968	2356	1337	—	0.19	—	4.97 0.49 G.O.
38. M. V. Vishva Anand	1958	1968	3864	2023	—	0.30	—	7.42 1.13 G.O.
39. M. V. S/O Kerala	1957	1962	6026	3529	0.25	1.82	18.18	1.61
40. M. V. S/O Gujarat	1957	1960	9056	5310	—	1.42	14.24	1.68
41. M. V. S/O Bihar	1957	1960	8394	4934	—	0.31	12.07	0.68 0.03 G.O.

TABLE No. 14(17)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
42.	M. V. S/O Assam	1957	1959	8394	4934	—	0.61	11.03	0.32 G.O.
43.	M. V. S/O Orissa	1957	1957	5329	2676	—	1.40	12.77	2.01
44.	M. V. Vishva Vir	1957	1964	7055	3692	0.62	1.73	18.47	2.07
45.	M. V. Vishva Pratap	1957	1964	7055	3692	0.25	2.08	16.28	2.92
46.	M. V. Vishva Lalita	1957	1968	3936	2043	—	0.83	—	9.90 0.92 G.O.
47.	M. V. Vishva Pratibha	1957	1968	3903	2051	—	0.33	—	9.28 0.80 G.O.
48.	M. V. Vishva Kanti	1956	1964	7055	3692	—	1.68	16.98	2.02 G.O.
49.	M. V. S/O Kutch	1956	1956	5266	2635	—	1.54	14.74	1.63
50.	M. V. Vishva Suman	1956	1968	3174	1643	—	0.68	—	6.32
51.	M. V. Vishva Kusum	1955	1968	3156	1702	—	—	—	—
52.	M. V. S/O Trav-Cochin	1954	1954	6244	3390	—	0.91	11.65	1.44
53.	M. V. S/O Andhra Pradesh	1947	1953	4529	2678	—	0.09	—	11.40
54.	M. V. S/O Bombay	1948	1954	8521	4393	15.74	—	60.11	—
55.	M. V. S/O Madras	1948	1954	8401	4263	15.38	—	67.20	—
56.	M. V. Vishva Vijay	1966	1966	9655	6398	—	1.63	16.27	1.83
57.	M. T. Lajpat Rai	1965	1965	28812	20782	27.17	4.30	41.33	2.61

TABLE No. 14(17)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
58. M. T. Desh Bandu	.	1964	1964	21717	15099	4.63	2 57	32.95	2.56
59. M. F. Jawaharlal Nehru	.	1969	1969	48441	33326	14.82	27.23	61.21	1.59
60. M. T. Lal Bahadur Shastri	.	1970	1970	40141	33326	7.32	8.01	63.18	1.17
61. M. T. Ajanta	.	1968	1968	23195	15961	—	2.26	30.41	2.13
62. M. T. Sanchi	.	1968	1968	23372	15939	—	3.36	41.40	2.42
63. M. T. Nalanda	.	1968	1968	23359	15926	6.37	1.85	32.98	2.78
64. M. F. Bellary	.	1970	1970	45752	31875	10.69	5.78	69.87	1.27
65. M. T. Buranji	.	1970	1970	45752	31875	9.62	7.67	63.52	4.82
66. M. T. Balladila	.	1971	1971	45752	31875	28.21	—	69.55	5.08
<b>II HOGUL LINE LIMITED</b>									
1. S. S. Saudi	.	1936	1966	5973	3818	7.11	—	26.19	—
2. S. S. Mozaffari	.	1948	1948	7024	3994	8.56	—	38.50	—
3. S. S. Mofhammadi	.	1947	1947	7026	4001	7.96	—	36.43	—
4. M. V. Akbar	.	1971	1971	8279	—	—	—	—	—
<b>2. PRIVATE SECTOR</b>									
<b>1. INDIA STEAMSHIP CO.***</b>									
1. Ind. Industry	.	1959	1959	5429	2918	—	0.64	9.91	0.86
2. Ind. Reliance	.	1955	1955	7422	3974	8.33	8.68	44.12	—
3. Ind. Renown	.	1955	1955	7657	3974	8.95	0.83	46.30	—



TABLE No. 14 (17)—Contd.

1	2	3	4	5	6	7	8	9	10
4.	Ind. Pioneer	.	1944	1947	7657	4535	5.23	—	43.56
5.	Ind. Trader	.	1944	1947	7659	4537	5.72	—	41.36
6.	Ind. Merchant	.	1944	1947	7659	4531	7.57	—	37.76
7.	Ind. Exporter	.	1945	1947	7660	4531	4.93	—	40.62
8.	Ind. Shipper	.	1944	1947	7660	4543	6.68	—	30.18
9.	Ind. Tribune	.	1963	1970	8811	4813	—	0.86 GO.	25.45 1.18 GO.
10.	Ind. Security	.	1958	1958	9300	5080	—	0.83	27.49 1.46
11.	Ind. Tradition	.	1960	1960	9398	5116	7.63	1.05	37.96
12.	Ind. Splendour	.	1957	1957	9409	5199	7.43	0.86	42.45
13.	Ind. Strength	.	1958	1958	9412	5158	—	0.98	28.20 1.36
14.	Ind. Trust	.	1960	1960	9417	5131	—	0.82	27.63 1.47
15.	Ind. Triumph	.	1960	1960	9417	5131	—	0.92	27.11 1.38
16.	Ind. Success	.	1958	1958	9458	5166	7.05	1.05	43.80
17.	Ind. Resolve	.	1956	1960	9779	5549	8.13	0.68	39.39
18.	Ind. Resources	.	1956	1960	9779	5549	7.68	0.86	42.45
19.	Ind. Valour	.	1971	1971	9829	6502	—	1.07	21.04 1.78
<b>II SURENDRA OVERSEAS LTD.</b>									
1.	Api Anli	.	1954	1960	6226	3126	—	0.51 MDO	— 8.13 MDO

TABLE No. 14. (17)—Contd.

	1	2	3	4	5	6	7	8	9	10
2. Apj. Sushma			1953	1960	6337	3625	—	0.51 MDO	—	11.18 MDO
3. Apj. Akash			1914	1960	6918	3559	—	0.51 MDO	—	11.18 MDO
4. Apj. Ambika			1966	1966	10928	7359	—	1.52	31.50	1.02
5. Apj. Priya			1966	1966	10931	7359	—	1.52	31.50	1.02
<b>III DEMPO STEAMSHIP LTD.</b>										
1. M. V. Jagat Mahini			1958	1969	12241	7170	—	1.52/ 2.03	20.32	1.52/ 2.03
2. M. V. Jagat Padmini			1958	1969	12318	6276	—	1.52/ 2.03	20.32	1.52/ 2.03
3. M. V. Jagat Neta			1965	1965	22452	16886	—	1.52/ 2.03	38.60	1.52/ 2.03
4. M. V. Jagat Vijeta			1966	1966	22452	16077	—	1.52/ 2.03	38.60	1.52/ 2.03
5. M. V. Jagat Swamini			1959	1970	12235	7174	—	1.52/ 2.03	20.32	1.52/ 2.03

**IV SOUTH INDIA SHIPPING CORPN. L.**

1. M. V. Chennai Jayam	1965	24355	10990	—	3.0	32.3*	3.0
2. M. V. Chennai Perumai	1966	24364	10995	—	2.7	34.8*	2.7
3. M. V. Chennai Otkam	1966	24365	18959	—	3.0	34.1*	3.0

TABLE No. 14 (17)—Contd.

1	2	3	4	5	6	7	8	9	10
	4. M. V. Chennai Sadhani	1966	1966	24365	18959	—	2.7	34.9*	2.7
	5. M. V. Chennai Selvam	1966	1966	24365	18959	—	2.8	35.1*	2.8
<b>V JAYANTI SHIPPING CO.**</b>									
	1. M. V. Krishna Jayanti	1956	1962	6248	3415	7.90	0.17	17.17	0.06
	2. M. V. Gandhi Jayanti	1954	1962	6266	3467	6.60	0.25	15.75	0.15
	3. M. V. Rama Jayanti	1954	1962	8397	4777	5.88	0.47	14.13	0.15
	4. M. V. Bhaskara Jayanti	1965	1965	15528	10227	5.24	2.85	35.40	12.36
	5. M. V. Leela Vati Jayanti	1965	1965	15528	10227	4.67	4.71	4.71	2.57
	6. M. V. Churnakya Jayanti	1965	1965	15229	10231	3.27	3.05	31.13	2.41
	7. M. V. Adl Jayanti	1966	1961	20418	12207	4.37	2.20	33.67	2.19
	8. M. V. Bharat Jayanti	1963	1963	21282	14380	—	2.25	27.61	1.86
	9. M. V. Gotama Jayanti	1963	1963	21632	13807	0.27	1.83	29.85	1.81
	10. M. V. Chandragupta Jayanti	1963	1963	21635	13790	0.33	0.59	29.91	1.66
	11. M. V. Akbar Jayanti	1963	1963	21635	13790	0.32	1.44	29.80	1.66
	12. M. V. Devaraya Jayanti	1964	1961	21635	13796	0.11	1.93	29.26	1.66
	13. M. V. Karishka Jayanti	1964	1964	21635	13800	0.98	2.35	30.12	1.90
	14. M. V. Samundra Gupta Jayanti	1964	1964	21635	13797	—	3.54	29.75	1.73
	15. M. V. Shahjahan Jayanti	1963	1963	21635	13798	5.24	2.85	35.40	12.36
	16. M. V. Vikaram Jayanti	1964	1964	34661	20286	15.55	3.97	66.70	3.08

Table No. 14 (17)—Contd.

	1	2	3	4	5	6	7	8	9	10
<b>VI R. A. J. LINES £</b>										
1. M. V. Sabarna . . .			1939	1963	995	536	—	0.50	—	6.00
2. M. V. Sadaka . . .			1964	1964	1348	639	—	0.50	—	6.00
3. M. V. Saleema . . .			1957	1971	2274	1379	—	1.00	—	7.50
<b>VII C. ALLIS LINES LTD £</b>										
1. S. S. Radhant . . .			1957	1957	2234	1006	4.00	—	14.00	—
2. S. S. Starlight . . .			1958	1971	3907	2177	5.00	—	16.00	—
<b>VIII SCINDIA STEAM NAV. CO. £</b>										
1. M. V. Jalazad . . .			1955	1955	6199	3410	—	1.5	16.5	1.7
2. M. V. Jalshwari . . .			1955	1955	6199	3410	—	1.2	16.5	1.7
3. M. V. Jalagopal . . .			1955	1955	9863	6093	—	1.3	19.4	1.9
4. M. V. Jagomathi . . .			1958	1963	9056	4995	—	1.2	16.1	1.9
5. M. V. Jalaganga . . .			1958	1963	8058	4454	—	1.0	12.0	1.8
6. M. V. Jalagouri . . .			1957	1964	0058	4455	—	1.0	12.5	1.4
7. M. V. Jalapalka . . .			1961	1963	9292	4992	—	1.0	25.0	1.0
8. M. V. Jalapankhi . . .			1961	1965	9292	4993	—	1.0	23.5	1.3
9. M. V. Jalgirja . . .			1963	1968	15326	6061	—	0.8	19.2	0.8
10. M. V. Narotam Morjee . . .			1967	1969	29956	21888	—	—	—	—

1	2	3	4	5	6	7	8	9	10
11.	M. V. Jaladhara	1957	1957	6327	5549	—	1.5	27.0	2.0
12.	M. V. Jaladhara	1958	1959	8699	5320	—	1.3	18.1	1.8
13.	M. V. Jaladhara	1960	1960	9176	5117	—	1.5	24.0	2.0
14.	M. V. Jaladhara	1957	1958	9488	5523	—	1.2	24.5	1.0
15.	M. V. Jaladhara	1956	1956	6527	3549	—	1.4	25.0	2.0
16.	M. V. Jaladhara	1956	1956	6527	3549	—	1.1	25.3	1.3
17.	M. V. Jaladhara	1957	1957	9488	5523	—	1.2	23.1	1.5
18.	M. V. Jaladhara	1957	1957	9488	5523	—	1.4	24.5	1.5
19.	M. V. Jaladhara	1959	1959	9177	5170	—	1.3	24.4	1.5
20.	M. V. Jaladhara	1960	1960	9215	5836	—	1.2	22.0	1.8
21.	M. V. Jaladhara	1961	1961	9228	5840	—	1.3	22.7	1.5
22.	M. V. Jaladhara	1964	1964	9408	5415	—	1.4	25.1	1.7
23.	M. V. Jaladhara	1965	1965	9379	5328	—	1.6	25.2	1.8
24.	M. V. Jaladhara	1966	1966	9371	5326	—	1.1	22.8	1.5
25.	M. V. Jaladhara	1955	1955	7179	4389	—	1.2	10.8	1.5
26.	M. V. Jaladhara	1955	1955	7178	4338	—	1.1	10.5	1.5
27.	M. V. Jaladhara	1956	1956	7178	4366	—	1.0	9.3	1.3
28.	M. V. Jaladhara	1958	1958	7172	4385	—	1.5	9.6	1.8
29.	M. V. Jaladhara	1955	1964	4486	2385	0.7	0.9	25.7	—
30.	M. V. Jaladhara	1956	1964	4486	2385	1.1	1.0	27.5	1.0

TAMR No 14 (17)—Contd

1	2	3	4	5	6	7	8	9	10
31.	M V Jalantari .	1955	1964	4486	2385	30	10	205	07
32.	M. V Jalantaya .	1954	1964	4486	2385	—	—	—	—
33.	M. V Jalantumi .	1966	1966	11323	6574	—	15	257	15
34.	M V. Jalantjan .	1966	1966	11323	6574	—	17	260	18
35.	M V Jalantna .	1967	1967	11323	6574	—	15	245	19
36.	M V Jalantya .	1966	1966	10933	7359	—	15	250	16
37.	M V Jalajotu .	1966	1966	10929	6783	—	16	260	20
38.	M. V Jalatrang	1967	1969	12089	6783	—	20	245	22
39.	M V Jalaman .	1970	1970	9566	5267	—	20	375	30
40.	M V Jalamayur	1970	1970	9564	5266	—	21	352	23
41.	M V Jalaman-ja	1971	1971	9564	5266	—	18	393	21
42.	M V Jalaman-ya	1970	1970	9464	5266	—	18	421	21
43.	M V Donavati .	1960	1968	1993	1163	—	03	—	46
IN GREAT EASTERN									
1.	M. V. Jag Anand .	1963	1968	11070	6290	—	200	2420	180
2.	M. V. Jag Anjala .	1963	1968	11066	6275	—	150	2625	150
3.	M V Jag Acti .	1959	1967	10132	6753	—	120	2000	120
4.	M. V. Jag Asha .	1963	1967	10947	6726	—	200	2275	180
5.	M V. Jag Dathan	1960	1969	14341	9074	—	170	2450	170

TABLE No. 14 (17)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
6.	M. V. Jag Dev	1968	1968	13325	9109	—	1 80	26 00	1 80
7.	M. V. Jag Jawan	1966	1966	23942	13538	—	2 00	35 00	2 50
8.	M. V. Jag Kisan	1966	1966	23706	13138	—	2 10	30 00	2 10
9.	M. V. Jag Laxmi	1957	1957	8798	6230	—	1 20	17 00	1 10
10.	M. V. Jag Manek	1957	1963	8747	4834	—	2 00	21 00	2 00
11.	M. V. Jag Ratna	1956	1963	8603	4693	—	1 50	19 00	1 30
12.	M. V. Jag Ravi	1969	1971	9443	6257	—	1 50	15 75	1 10
13.	M. V. Jag Rekha	1969	1971	9120	6228	—	2 00	18 50	1 00
14.	M. V. Jag Suvanti	1962	1962	9069	5525	—	1 60	18 00	1 25
15.	M. V. Jag Vijaya	1962	1962	9069	5492	—	1 50	19 00	1 35
16.	M. V. Jag Jwala	1952	1964	9874	5860	—	1 00	24 00	1 00
<b>XI CHOWGULE STEAMSHIP</b>									
1.	M. V. Marutha Progress	1964	1964	22210	16235	—	2 03	37 59	2 03
2.	M. V. Marutha Providence	1966	1966	22593	16194	—	2 54	42 67	2 54
<b>XI PENT OCEAN STEAMSHIP@</b>									
1.	Samudra Jat	1943	1963	7207	4360	8 00 PO	—	26 00 PO	—

\* Heavy Oil

\*\* Relates to the year 1970

\*\*\* Relates to the year 1971-72

@ Relates to 1970-71

TABLE No. 14 (17)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2.	Samudra Jyoti .	1943	1963	7278	1279	8.00 FO	—	26.00 FO	—
3.	Samudra Daya .	1943	1948	7209	4481	8.00 FO	—	26.00 FO	—
<b>XII UNIVERSAL SHIPPING CO.</b>									
1.	S. S. Unigolalar .	1956	1969	1764	918	6.2	—	14.5	—
<b>XIII SOUTH EAST ASIA S</b>									
1.	M. V. Malabharat	1959	1971	6793	3693	—	2.00 MDO	21.00	2.00 MDO
<b>XIV DAMODAR BULK CARRIER</b>									
1.	Damodar Manuovi .	1951	1951	1527	830	0.29 GO	1.00 FO	4.00 GO	0.70 FO
2.	Damodar Faurbe .	1969	1969	24573	18973	2.30 MDO	1.00 FO	2.50 MDO	46.60 FO
3.	Damodar Farka .	1969	1969	24330	18287	2.30 MDO	1.00 FO	2.50 MDO	45.30 FO
4.	Damodar Zuari .	1953		4147	1979	3.00 BO	—	23.3 HO	—

£ Related to the year 1971

MDO . . . Marine Diesel Oil

FO . . . Furnace Oil

GO . . . Gas Oil

BO . . . Bunker Oil

Note.—Since 1-1-1973 Jayanti Shipping has been merged with S.C.I.



TABLE No. 14 (10)  
SHIPPING. DEVELOPMENT FUND—ANNUAL OPERATIONS  
(1959-60 to 1971-72)

(Rs. in lakhs)

Year	Opening Balance	RECEIPTS						Loans repay-ments from Shipping Cos.	Total Colls. (3) to (8)
		Loans from Govt.	Grants from Govt.	Subsidy from Govt.	Interest received Shipping Cos.	Deposits with Reserve Bank			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1959-60	...	605.91	0.10	0.83	1.05	6.12	—	614.01	
1960-61	319.18	300.00	0.10	3.29	9.01	21.07	15.67	349.17	
1961-62	609.53	992.15	0.20	1.28	13.95	35.68	17.00	1063.26	
1962-63	1170.73	100.00	0.22	19.18	29.19	36.74	31.25	516.88	
1963-64	1357.88	100.00	0.12	17.87	41.19	46.05	49.15	555.28	
1964-65	819.91	1280.00	0.40	28.56	62.10	34.75	65.73	1471.54	
1965-66	1325.94	906.00	0.80	51.96	84.63	59.31	1159.15	1262.18	
1966-67	1704.81	..	1.08	13.83	112.18	62.41	161.26	381.06	
1967-68	702.13	1000.00	1.33	82.36	141.22	31.45	210.39	1166.75	
1968-69	513.05	1607.00	1.00	135.63	168.52	20.41	557.65	2483.23	
1969-70	692.18	1800.00	1.39	135.28	217.25	28.32	707.13	2919.37	
1970-71	551.35	3450.00	1.40	189.06	311.00	17.33	772.29	1771.08	
1971-72	1166.81	1700.00	5.45	255.88	100.66	35.58	993.39	3390.96	
Annual Totals	..	14134.06	131.89	968.01	1622.88	465.25	3740.66	21244.75	

TABLE No. 14(18)—Contd.

(Rs. in lakhs)

Year	PAYMENTS					Closing Balances
	(1)	(10)	(11)	(12)	(13)	
		Interest paid to Govt. on loans	Loan disbursed to cos.	Administrative expenses	Total Cols. (10) to (12)	
1959-60	.	0.00	287.00	0.03	295.03	319.18
1960-61	.	33.40	25.90	0.17	59.47	609.53
1961-62	.	33.91	433.13	0.15	487.19	1170.73
1962-63	.	105.41	277.08	0.26	362.75	1357.88
1963-64	.	103.41	617.37	0.42	723.20	849.94
1964-65	.	125.41	1126.13	0.40	1251.94	1325.94
1965-66	.	195.93	706.48	0.80	903.21	1707.84
1966-67	.	210.72	1163.07	1.00	1302.79	702.13
1967-68	.	255.04	1373.33	1.11	1629.49	513.05
1968-69	.	324.56	1972.74	1.20	2298.50	692.18
1969-70	.	410.85	2628.09	1.26	3040.20	551.35
1970-71	.	547.39	3598.70	1.28	4147.37	1166.81
1971-72	.	692.12	2766.20	1.71	3460.03	1087.70
Cumulative Totals	.	3116.15	16975.22	9.79	20041.16	...

Source :—Annual Reports and Accounts of the Shipping Fund Committee.

Notes :—(i) Interest on loans from Government paid by SDFC and the interest received on SDFC deposits with the Reserve Bank of India are at 4.5% from 1959-60 to 1961-62, @ 5% from 1962-63 to 1964-65, @ 5.5% from 1965-66 to 1970-71 and 6% since 1971-72.

(ii) Interest charged by SDFC from the Companies is @ 3% in respect of loans sanctioned prior to 1-2-1971 and 4% thereafter.

(iii) The difference between Col. 9 and Col. 13 is not equal to Col. 14 (i.e. Cash in hand and in bank) as certain expenditure on fixed assets, deposits, advances to staff and others have not been shown in the above table beside the difference on account of accrued receipts and outstanding liabilities.

TABLE No.14(19)

**SHIPPING DEVELOPMENT FUND TOTAL FINANCIAL ASSISTANCE  
EXTENDED TO THE INDIGENOUS SHIPPING INDUSTRY AT THE  
END OF EACH YEAR**

(Cumulative Totals)

(Rs. in million)

Year	Loans Sanction- ed	Loans disbur- sed to compa- nies	Repay- ments received from compa- nies	Loan Out- standing	No. of guaran- tees/ counter guaran- tees issued
(1)	(2)	(3)	(4)	(5)	(6)
1959-60 . . .	28.70	28.70	..	28.70	...
1960-61 . . .	121.60	31.20	1.57	29.72	...
1961-62 . . .	422.42	74.60	3.27	71.33	...
1962-63 . . .	454.52	102.31	6.39	95.92	11
1963-64 . . .	569.73	164.05	11.34	152.71	11
1964-65 . . .	870.12	276.66	17.91	258.75	12
1965-66 . . .	981.41	347.81	38.86	313.45	15
1966-67 . . .	1034.02	463.62	49.98	413.64	17
1967-68 . . .	1470.34	600.95	71.02	529.93	18
1968-69 . . .	1739.29	798.05	126.61	671.44	18
1969-70 . . .	2647.94	1060.86	197.33	863.53	21
1970-71 . . .	3986.08	1420.90	274.56	1146.84	27
1971-72 . . .	4415.07	1697.52	373.89	1323.63	30

TABLE No. 14(20)

**COMPANY-WISE LOANS SANCTIONED BY THE SHIPPING DEVELOPMENT FUND COMMITTEE (S.D.F.C.) SINCE ITS INCEPTION UPTO 31ST MARCH, 1972**

(Rs. in lakhs)

Sl. No.	Name of the Shipping Company	Amount of loans sanctioned	Amount paid to the Cos.	Amount repaid to the S.D.F.C.	Balance of loans recoverable from companies
(1)	(2)	(3)	(4)	(5)	(6)
1.	Africana Co. (P) Ltd., Bombay	26.52	26.52	26.52	—
2.	Ambassador Steamships Ltd., Cochin	5.00	5.00	5.00	—
3.	Calcutta Steam Nav. Co. Ltd., Calcutta	16.00	16.00	16.00	—
4.	Bharat Line Ltd., Bombay	96.00	96.00	96.00	—
5.	Chowgule Steamship Ltd., Bombay	1927.76	501.65	142.36	353.75
6.	Damodar Bulk Carriers Ltd., Bombay	2037.71	204.07	—	204.07
7.	Dempo Steamships Ltd., Bombay	1637.80	378.88	126.16	231.76
8.	Great Eastern Shipping Co. Ltd., Bombay	4323.52	1115.62	359.24	124.62
9.	India Steamships Co. Ltd., Bombay	1321.18	323.68	69.67	257.81
10.	Jagatjit Shipping Co. Ltd., Bombay	2797.55	2323.21	795.51	1927.48
11.	Kerala Lines Limited, Madras	42.02	12.92	14.66	37.50

TABLE No. 1 20)- *Contd*

(Rs. in lakhs)					
(1)	(2)	(3)	(4)	(5)	(6)
12. Mogul Line Limited, Bombay	1024.17	114.42	28.60	85.82	
13. Raj Kumar Lines Ltd., Calcutta	28.00	28.00	28.00	—	
14. R. A. J. Lines Ltd., Calcutta	84.00	81.00	30.22	53.78	
15. Ratnakar Shipping Co. Ltd., Calcutta	547.61	139.83	259.10	180.73	
16. Scindia Steam Nav. Co. Ltd., Bombay	3374.26	1374.00	354.35	1019.65	
17. South India Shipping Corporation Ltd., Madras	1890.72	1122.70	393.55	729.15	
18. South East Asia Shipping Co., Ltd., Bombay	13.00	13.00	13.00	—	
19. Surendra Overseas Ltd., Calcutta	614.85	119.25	255.12	194.13	
20. Thakur Shipping Co. Ltd., Bombay	59.71	59.71	...	59.71	
21. Shipping Corporation Ltd., Bombay	22060.66	7809.36	727.89	7081.47	
<b>Grand Total</b>	<b>44150.71</b>	<b>16975.22</b>	<b>3938.95</b>	<b>263.27</b>	

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SECTION 13 : COASTAL SHIPPING INDUSTRY

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## COASTAL SHIPPING INDUSTRY

With a coast line of over 4,800 kilometers on the western and eastern banks of the mainland and with the islands of Andaman and Nicobar in the Bay of Bengal and the Laccadive, Minicoy and Aminidivi in the Arabian Sea which also form part of Indian territory, the coastal trade of India consists of trade between the various ports, on the mainland, as well as trade between the mainland and these islands. Inter-island services are negligible since the islands are not yet well developed. Some ferry services exist, however for passengers and essential commodities. Regular Feeder Services are also non-existent except occasionally when a large bulk carrier brings grains from abroad and smaller ships are used to lighten it and carry cargo to smaller ports.

### Reservation of Coastal Traffic

Coastal traffic is reserved for national shipping. Under Section 407 of the Merchant Shipping Act, 1958, no ship other than an Indian ship shall be engaged in coastal trade except under a licence granted by the Director General of Shipping. Though foreign ships could thus operate under a licence, such licences are not normally granted except in special cases such as where a foreign ship carrying cargo for one Indian port happens to unload it at another Indian port and subsequently the same or another foreign ship wishes to carry that cargo to the original port of destination; similarly due to shortage of Indian tankers tonnage for the movement of refinery products on the coast, foreign tankers are permitted to operate.

### Shipowners Association for Coastal Shipping

The Indian Coastal Conference is an association of coastal operators which was formed by an agreement signed on 31-8-1951. Its present membership consists of 16 companies. An essential condition for its

membership is that the company should own 2. .... not less than 750 GRT each, or one ship not below 1500 GRT licensed, to ply on the coast. A number of its members are engaged in overseas trade also.

The Conference regulates the dry cargo trade on the coast, prescribes terms, conditions and shipping practices for its carriage. The arrangement does not, however, provide for the pooling of cargo or freight or scheduled sailings by member lines in any sector of the coast. Nor does it provide for quotas for the member lines in the movement of any commodity. There is also no obligation on the member lines to retain any minimum tonnage on the coast with the result that they are free to direct their coastal vessels (with the permission of Director General of Shipping) to overseas trade when they find it substantially more profitable than the coastal trade. The Conference is recognised by the Government of India as the representative body of coastal shipowners. The conference is also permitted to regulate the coastal freight rate to a limited extent.

#### **Shippers' Associations for Coastal Trade.**

The shippers have three zonal associations to look after their interests, namely :

- (1) The Western India Shippers Association, covering the West Coast of India from Kandla to Bombay.
- (2) The Eastern India Shippers Association, catering to the needs of the shippers in Calcutta; and
- (3) The Southern India Shippers Association which looks into the grievances of shippers in the area covered by the region from Madras to Kerala.

An apex body viz., All India Shippers Council looks after the problems of shippers as well as overseas trade at a national level.

#### **Fixation of Coastal Freight Rates & Fare**

Under section 412 of the Merchant Shipping Act, the Central Government have powers to fix coastal freight rates and passenger fares, and if considered necessary, may constitute a Board for this purpose. Though no standing Board has so far been constituted, a



hoc committees, commissions were set up several times for this purpose. In actual practice, the Indian Coastal Conference is allowed to vary freight rates on individual commodities, excepting coal, salt and timber; but a general increase in freight rates or increases in the rates for coal, salt and timber can be effected by the Coastal Conference only with the prior approval of Government. Similarly as regards chartering whenever, there is disagreement between shipowners and charterers, the long term charter hire rate for the Indian tankers taken for employment on the coast is fixed by Government. The tanker rates and passenger fares are not within the purview of the Indian Coastal Conference.

The Government of India allowed the following general increase in freight rates since 1956:--

April, 1956	15%
1st June, 1962	15% Except for Coal moving up to Cochin for which the increase allowed was 10%
1st August, 1965	10%
1st July, 1967	10%
1st April, 1970	20% (Except for Coal)
15th June 1971	10% on Coal alone.
15th Dec. 1972	15% Except for coal on which only 5% was allowed.

In addition to above, the shipping companies were allowed to levy surcharge on the cargo from time to time so as to cover the increase in fuel prices.

To facilitate periodic review of coastal freight rates by Government, provisions are prescribed for furnishing the financial results of coastal operation of each shipping company to the Director General of Shipping who will examine these results to see whether any increase in freight rates is called for and then make suitable recommendations to the Central Government who will take a decision after taking into consideration the interests of both the shipowners and the shipper.

#### Customs Procedure for Coastal Cargo

For loading coastal cargo on a ship, the shipper is required to fill in shipping Bill known as "Shipping Bill for Indian Produce (Free Goods)". This bill is cleared by Customs normally without physical examination of the packages prior to shipment. The procedure prescribed

for the Customs for the clearance of coastal vessels is more or less the same as for vessels sailing for overseas ports.

For unloading, the consignees are required to file with the Customs prior to the arrival of ship a Bill of Entry, giving the full details of cargo such as number of packages, marks, description, gross weight, value, port(s) of loading, country of origin etc. On the arrival of ship the Agents file Import General Manifest. The packages indicated in the Bill of Entry of a consignee are verified with the Import General Manifest and necessary notes made in the records of both the Customs and the port authorities. The goods are then discharged in the custody of Port authorities (who deliver them to the consignee on issue of delivery order by the Ship's Agents) who will subsequently issue to the Customs and the Ship's Agents their out-turn. Reports showing the actual quantity landed and the shortage or excess, if any, as per the Import General Manifest of the Agents of the ships. The Customs authorities ask the Agents to give explanations for the unaccounted packages. If the shortage includes dutiable cargo imported from abroad but transhipped from one Indian port to another by a coastal vessel the Customs authorities impose a penalty on the carriers. Similarly, there are certain items of exportable goods on which cess is leviable by the Customs, and if any of these goods are also short landed by a coastal vessel, the Customs levy a penalty on the carriers. In all other cases of goods short landed by a coastal vessel no penalty is imposed by the Customs.

TABLE No. 15(1)

**SHARE OF PUBLIC AND PRIVATE SECTOR UNDERTAKINGS  
IN THE COASTAL SHIPPING INDUSTRY (AS ON 30.6.1973)**

Type of trades in which engaged	No. of Indian Under- takings			No. of Coastal Ships		
	Total	Public Sector	Private Sector	Total	Public Sector	Private Sector
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Coastal Trade	10	1	9	24	6	18
2. Both Coastal and Overseas Trades.	14	2	12	32	11	21
<b>Total</b>	<b>24</b>	<b>3</b>	<b>21</b>	<b>56</b>	<b>17</b>	<b>39</b>

TABLE No. 15(2)

## COASTAL FLEET OWNED AND COASTAL CARGO BOTH DRY AND WET AND PASSENGER TRAFFIC CARRIED BY INDIAN SHIPPING INDUSTRY

(1951—73)

Year ending 31st December	No. of vessels	Total GRT in lakhs	Cargo carried (in lakh tonnes)			Passengers carried (in lakh Nos.)
			Total	Dry	Wet	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1951.	79	2.17	25.15	25.15	...	13.36
1952.	88	2.55	27.79	27.79	...	14.19
1953.	98	2.57	28.78	28.78	..	...
1954.	101	2.86	29.05	29.05	.	12.40
1955.	92	2.21	27.04	27.04		...
1956.	85	2.47	26.74	25.92	0.82	9.41
1957.	05	2.67	27.75	25.77	1.90	10.04
1958.	85	2.50	29.13	26.66	2.47	9.01
1959.	95	3.07	30.43	25.57	4.06	0.91
1960.	90	3.15	33.46	27.45	6.01	9.06
1961.	104	3.62	39.29	33.49	5.80	9.03
1962.	107	3.95	45.65	40.77	4.88	9.70
1963.	107	3.03	45.30	40.29	5.01	8.06
1964.	114	4.12	40.58	36.14	4.44	9.64
1965.	101	3.38	38.24	32.47	5.77	8.95
1966.	95	3.30	31.09	25.24	6.65	9.24
1967.	82	2.82	29.48	23.17	6.31	8.10
1968.	75	2.76	26.83	20.74	6.09	7.40
1969.	70	2.52	27.79	10.74	9.05	6.14
1970.	69	2.50	23.33	12.35	10.98	5.87
1971.	62	2.10	26.77	16.40	10.37	5.45
1972.	59	2.01	27.92	17.16	10.76	5.12
1973.	56	2.20	29.46	15.49	13.97	...

TABLE No. 15(3)

**COASTAL TANKER FLEET OWNED AND COASTAL WET  
CARGO CARRIED  
(1960-72)**

Year ending 31st December	Number of tankers	DWT in lakhs	Average DWT per tanker (in lakhs)	Refinery products carried (lakh tonnes)		Average No. of voyages made per annum i.e. (5) ÷ (3)
				Total	Per tanker	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1960.	3	0.36	0.120	6.01	2.003	17
1961.	3	0.36	0.120	5.80	1.933	16
1962.	3	0.37	0.123	4.88	1.627	13
1963.	3	0.37	0.123	5.01	1.670	14
1964.	3	0.37	0.123	4.44	1.480	12
1965.	3	0.37	0.123	5.77	1.923	16
1966.	3	0.37	0.123	6.55	2.217	11
1967.	4	0.60	0.150	6.31	1.577	11
1968.	5	0.75	0.150	6.09	1.218	8
1969.	5	0.75	0.150	9.05	1.810	12
1970.	5	0.74	0.148	10.99	2.198	15
1971.	5	0.74	0.148	10.37	2.074	14
1972.	4	0.58	0.145	10.76	2.690	18

TABLE No 15(4)

SHARE OF INDIAN SHIPPING INDUSTRY IN COASTAL CARGO  
TRAFFIC

(1951-72)

(Qty. in lakh tonnes)

Year	Dry Cargo				% share of Indian Shipping companies
	Coal	Salt	General Cargo	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1951 . . .	7.70	4.54	12.91	25.15	94
1952 . . .	10.89	4.71	12.19	27.79	95
1953 . . .	12.63	4.18	11.97	28.78	100
1954 . . .	12.28	4.79	11.98	29.05	100
1955 . . .	10.64	4.71	11.69	27.04	100
1956 . . .	10.97	4.78	10.17	25.92	100
1957 . . .	10.51	4.80	10.46	25.77	100
1958 . . .	10.86	3.93	11.87	26.66	100
1959 . . .	10.16	3.99	11.42	25.57	100
1960 . . .	11.03	4.17	12.25	27.45	100
1961 . . .	13.73	4.73	15.03	33.49	100
1962 . . .	19.80	4.58	16.39	40.77	100
1963 . . .	18.95	4.76	16.58	40.29	100
1964 . . .	15.65	4.53	15.96	36.14	100
1965 . . .	12.22	4.03	16.22	32.47	100
1966 . . .	7.02	3.25	14.97	25.24	100
1967 . . .	6.77	2.90	13.50	23.17	100
1968 . . .	3.74	3.50	13.50	20.74	100
1969 . . .	6.96	2.46	9.32	18.74	100
1970 . . .	2.51	3.09	6.81	12.35	100
1971 . . .	5.08	5.18	6.14	16.40	100
1972 . . .	5.85	3.88	7.43	17.16	100

(Approx.)

TABLE No. 15(4)—Contd.

(Qty. in lakh tonnes)

Year	Wet Cargo				Total of dry and wet cargo	% share of Indian Shipping Companies
	Quantity carried in Indian tonnage	Quantity carried in foreign tonnage	Total	% Share of Indian Shipping Companies		
(1)	(7)	(8)	(9)	(10)	(11)	(12)
1951	—	—	—	—	25.15	91.00
1952	—	—	—	—	27.79	95.00
1953	—	—	—	—	28.78	100.00
1954	—	—	—	—	29.05	100.00
1955	—	8.17	8.17	—	35.21	76.80
1956	0.82	10.95	11.77	6.9	37.69	70.95
1957	1.98	11.79	13.77	14.4	39.54	70.18
1958	2.47	12.68	15.15	16.3	41.81	69.67
1959	4.86	12.66	17.52	27.7	43.09	70.62
1960	6.01	14.24	20.25	29.7	47.70	70.15
1961	5.80	15.15	20.95	27.7	54.44	72.17
1962	4.88	18.98	23.26	20.9	64.03	71.29
1963	5.01	24.58	29.59	16.9	69.88	64.83
1964	4.44	24.96	29.40	15.1	65.54	61.02
1965	5.77	23.12	28.89	20.0	61.36	62.32
1966	6.65	23.94	30.59	21.7	55.83	57.12
1967	6.31	21.70	28.01	22.5	51.18	57.60
1968	6.09	25.93	32.07	18.9	52.81	50.80
1969	9.05	24.86	33.91	26.7	52.65	52.78
1970	10.99	19.02	30.00	36.6	42.35	55.09
1971	10.37	16.89	27.26	41.0	43.66	61.91
1972	10.76	10.24	21.00	51.2	38.16	73.16

TABLE No. 15(5)

DISTRIBUTION OF NUMBER AND TONNAGE OF COASTAL FLEET  
OF INDIA BY TYPE AND AGE

(AS ON 30-6-1973)

(GRT in '000)

By Types	Age Groups	Under 2 years		3-5 years		6-10 years		11-15 years	
		No.	GRT	No.	GRT	No.	GRT	No.	GRT
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Cargo Liners		—	—	—	—	7	46	9	22
Bulk Carriers		—	—	—	—	—	—	—	—
Tramps		—	—	—	—	—	—	—	—
Oil Tankers		—	—	—	—	—	—	1	8
Oil Ore Carriers		—	—	—	—	—	—	—	—
Passenger-cum-cargo		—	—	2	4	4	6	—	—
ALL TYPES		—	—	2	4	11	52	10	30



TABLE NO. 15(5)—Contd.

Age Groups By Types	(GRT in '000)					
	16-20 years		Over 20 years		All Age Groups	
	No.	GRT	No.	GRT	No.	GRT
(1)	(10)	(11)	(12)	(13)	(14)	(15)
Cargo Liners . . .	11	40	15	31	42	139
Bulk Carriers . . .	—	—	—	—	—	—
Tramps . . . . .	—	—	—	—	—	—
Oil Tankers . . . .	—	—	2	22	3	30
Oil Ore Carriers . .	—	—	—	—	—	—
Passenger-cum-cargo .	1	6	4	12	11	20
ALL TYPES . . . . .	12	46	21	65	56	197

TABLE No. 15(6)

**DISTRIBUTION OF NUMBER AND TONNAGE OF COASTAL  
FLEET OF INDIA BY SIZE AND AGE  
(AS ON 30-6-1973)**

Age Groups By Sizes	Under 2 years		3-5 years		6-10 years	
	No.	GRT	No.	GRT	No.	GRT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
100-999 tonnes . . .	—	—	—	—	1	1
1000-1999 tonnes . . .	—	—	2	4	6	13
5000-9999 tonnes . . .	—	—	—	—	4	38
10000-19999 tonnes . . .	—	—	—	—	—	—
20000-39999 tonnes . . .	—	—	—	—	—	—
40000 and above . . .	—	—	—	—	—	—
All Sizes . . .	—	—	2	4	11	52

TABLE No. 15(6)—Cont'd.

B, Sizes	Age Groups 11-15 years		16-20 years		Over 20 years		All Age Groups	
	No.	GRT	No.	GRT	No.	GRT	No.	GRT
(1)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
100-999 tonnes . . .	2	1	1	7	7	2	11	9
1000-4999 tonnes . . .	6	14	18	9	9	19	30	68
5000-9999 tonnes . . .	2	15	27	3	4	32	14	112
10000-19999 tonnes . . .	—	—	—	1	1	12	1	12
20000-39999 tonnes . . .	—	—	—	—	—	—	—	—
40000 and above . . .	—	—	—	—	—	—	—	—
All Sizes . . .	10	30	46	21	21	65	56	197

TABLE No. 15(7)

**DISTRIBUTION OF NUMBER AND TONNAGE OF COASTAL FLEET  
OF INDIA—BY TYPE AND SIZE OF VESSELS (AS ON 30-6-1973)**

(GRT in '000)

Size Groups (In tonnes)	100-999		1000-4999		5000-9999		10000-19999		20000 and above		Total Sizes	
	No.	GRT	No.	GRT	No.	GRT	No.	GRT	No.	GRT	No.	GRT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Cargo Lin- ers	8	3	24	57	10	79	—	—	—	—	42	139
Bulk Carri- ers	—	—	—	—	—	—	—	—	—	—	—	—
Tramps	—	—	—	—	—	—	—	—	—	—	—	—
Oil Tankers	—	—	—	—	2	18	1	12	—	—	3	30
Oil Ore- Carriers	—	—	—	—	—	—	—	—	—	—	—	—
Passenger- cum-cargo	3	2	6	11	2	15	—	—	—	—	11	28
ALL TYPES	11	5	30	68	14	112	1	12	—	—	56	197

TABLE No. 15(8)

TREND IN THE AGE DISTRIBUTION OF NUMBER AND TON-  
NAGE OF INDIAN COASTAL FLEET

(1966 1973)

(GRT in '000)

Year	Age Groups			Under 5 years		6-10 years		11-15 years		16-20 years		Over 20 years		All Fleet	
				No. GRT		No. GRT		No. GRT		No. GRT		No. GRT		No. GRT	
(1)				(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1966* .	.	.	.	.	11	.	44	104		95	..	69	..	323	
1967* .	.	.	.	...	50		35	100	..	94		67	..	346	
1968* .	.	.	.	8	48	3	7	12	46	22	93	32	91	77	285
1969* .	.	.	.	7	39	5	12	11	33	23	94	32	95	78	275
1970**	.	.	.	5	16	11	52	9	32	22	93	36	114	81	307
1971£.	.	.	.	7	43	6	13	12	38	15	65	22	59	62	218
1972@.	.	.	.	2	4	11	52	9	31	15	59	22	52	59	198
1973@	.	.	.	2	4	11	52	10	30	12	46	21	65	56	197

\*As on 31st March.

\*\*As on 28th Feb.

£As on 31st Dec.

@As on 30th Jun.

TABLE No 15(9)

COASTAL TRAFFIC AND EARNINGS OF INDIAN UNDERTAKINGS  
(1970-71 and 1971-72)

Items	1970-71			1971-72		
	Public Sector	Private Sector	Total	Public Sector	Private Sector	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Cargo Carried (in '000 M/T)	181	1,034	1,215	230	1,620	1,850
2. Freight on Cargo (in '000 Rs)	15,479	56,038	71,537	18,236	93,823	112,059
3. Passenger Carried (in '000 Nos.)	86	512	598	—	423	423
4. Passenger earnings (in '000 Rs)	1,609	7,533	9,142	1,796	7,086	8,882
5. Charter Hire earnings (in '000 Rs.)	20,620	30,572	51,192	—	7,993	7,993

TABLE No. 15(10)

**GROWTH OF INDIA'S COASTAL TRAFFIC EARNING FROM  
NATIONAL SHIPPING**  
(1950-51 to 1971-72)

(Rs. in crores)

Year	Freight	Fare	Total
(1)	(2)	(3)	(4)
1955-56 . . . . .	.	...	10.77
1956-57 . . . . .	...	...	13.74
1957-58 . . . . .	..	...	12.86
1958-59 . . . . .	.	..	13.00
1959-60 . . . . .	.	...	13.55
1960-61 . . . . .	.	...	13.74
1961-62 . . . . .	.	..	12.85
1962-63 . . . . .	.	...	16.51
1963-64 . . . . .	.	...	14.78
1964-65 . . . . .	1.	...	13.35
1965-66 . . . . .	11.60	0.83	12.43
1966-67 . . . . .	13.85	0.75	14.60
1967-68 . . . . .	11.74	1.06	12.80
1968-69 . . . . .	9.93	0.90	10.83
1969-70 . . . . .	8.97	0.74	9.71
1970-71 . . . . .	12.27	0.92	13.19
1971-72 . . . . .	12.00	0.89	12.89

TABLE No. 15(11)

**TRADE RANGES OF INDIAN COASTAL CONFERENCE FOR LINER CARGO**

**A. KANDLA-TUTICORIN RANGE**

1. Gujarat Ports/Bombay/Mangalore.
2. Gujarat Ports/Malabar Ports/Tuticorin.
3. Bombay/Malabar Ports/Tuticorin.
4. Malabar Ports/Gujarat Ports/Bombay/Maharashtra Ports (excluding Bombay), Mormugao and Mysore Ports/Tuticorin
5. Tuticorin/Gujarat Ports/Bombay/Maharashtra Ports, (excluding Bombay) Mormugao and Mysore Ports, Malabar Ports
6. Maharashtra Ports (excluding Bombay), Mormugao and Mysore Ports/ Malabar Ports/Tuticorin and Inter-Malabar Ports.

**B. WEST COAST PORTS TO EAST COAST PORTS**

1. Gujarat Ports/East Coast Ports.
2. Bombay/East Coast Ports.
3. Maharashtra Ports (excluding Bombay), Mormugao, Mysore Ports and Malabar Ports/East Coast Ports.
4. Tuticorin/East Coast Ports.

**C. EAST COAST PORTS TO COAST PORTS**

1. Calcutta/Coast Ports.
2. Coromandal Ports/Coast Ports.
3. Madras/Coast Ports.
4. South Madras Ports/Coast Ports.
5. *Andaman and Nicobar Schedule*
  - (a) East Coast Ports to Andaman & Nicobar Islands.
  - (b) Andaman & Nicobar Islands to East Coast Ports.
  - (c) Inter-Island Routes.



TABLE No. 15(12)

FREIGHT RATE OF INDIAN COASTAL CONFERENCE FOR VARIOUS  
ROUTES AND COMMODITIES (AS ON 30-6-1973)

(Rates in Rupees per tonne)

TO	FROM	Salt in bulk			Rock Phosphate in Bulk	Coal in Bulk
		Gujarat	Bombay	Tuticorin	Coroma- ndel	Calcutta
(1)		(2)	(3)	(4)	(5)	(6)
1. Gujarat	.	34.30 FIOT				58.54
2. Bombay	.	37.50 FIOT		45.40 FIOT		58.54
3. Other Maharashtra Ports		56.40* FIOT			98.50	
4. Mormugao	.	56.40 FIOT			98.50	69.50
5. Mangalore	.	56.40* FIOT			98.50	64.95
6. Other Mysore Ports		56.40* FIOT			98.50	64.95
7. Cochin	.	45.40 FIOT			98.50	56.12
8. Other Malabar Ports		45.40 FIOT			98.50	
9. Tuticorin	.				86.30	51.75

TABLE No. 15(12)—(Contd.)

(1)	(2)	(3)	(4)	(5)	(6)
10. South Madras Ports	57.20			77.90	51.75
	FIOT				(Nagapatnam & Cuddalore)
11. Madras	57.20			67.60	56.57 F.O.
	FIOT				basis (Incl. surcharges)
12. Coromandel Ports	57.20			56.30	50.05
	FIOT				(Kakinada)
13. Visakhapatnam	57.20			56.30	46.92
	FIOT				
14. Calcutta	57.20	57.20	46.10		
	FIOT	FIOT	FIOT		

\*Rs. 11 per tonne extra in case of transshipment at Bombay.

Note.—All the above rates are subject to a bunker surcharge of Rs. 6.3 per tonne.

TABLE No. 15(12)—(Contd.)

(Rates in Rupees per tonne)

TO	FROM	Salt in Bags			Coal in Bags
		Gujarat	Bombay	Tuticorin	Calcutta
(1)		(2)	(3)	(4)	(5)
1. Gujarat Ports . . . .		34-30 FIOT			140-70
2. Bombay . . . . .		37-50 FIOT		45-40 FIOT	89-70
3. Other Maharashtra Ports . . . .		56-40* FIOT			139-80
4. Mormugao . . . . .		56-40* FIOT			139-80
5. Mangalore . . . . .		56-40* FIOT			139-80
6. Other Mysore Ports . . . . .		56-40* FIOT			137-80
7. Malabar Ports . . . . .		45-40 FIOT			139-80
8. Tuticorin . . . . .		—			127-80
9. South Madras Ports . . . . .		57-20 FIOT			118-80
10. Madras . . . . .		57-20 FIOT			89-70
11. Coromandel Ports . . . . .		57-20 FIOT			89-70
12. Vindhya Pradesh . . . . .		57-20 FIOT			89-70
13. Calcutta . . . . .		57-20 FIOT	57-20 FIOT	138-60 FIOT	

\*Rs. 11 per tonne extra in case of transshipment at Bombay.

NOTE.—All the above rates are subject to a bunker surcharge of Rs. 6-50 per tonne.

TABLE 15(12)—(Contd.)

## CEMENT

(Rates in Rupees per tonne)

TO	FROM	Gujarat*	Bombay	Malabar	Tuticorin	Madras
(1)	(2)	(3)	(4)	(5)	(6)	
1. Gujarat Ports	32.60		68.10			
2. Bombay	43.90		60.50	53.80		48.90
3. Other Maharashtra Ports			60.50	72.20		72.20
4. Mormugao	63.50		60.50	72.20		72.20
5. Mangalore	63.50		60.50	72.20		72.20
6. Other Mysore Ports			60.50	72.20		72.20
7. Malabar	60.50	45.10		60.50		72.20
8. Tuticorin	71.90		60.50			
9. South Madras Ports	86.80					
10. Coromandel Ports				71.90		
11. Madras	82.20			66.40		
12. Visakhapatnam				71.90		
13. Calcutta	96.20			80.20		72.90

\*Rs. 2.00 per tonne surcharge on cement loaded at Sikka Port.

NOTE.—All the above rates are subject to a bunker surcharge of Rs. 6.90 per tonne.

TABLE No. 15(12)—(Contd.)

## TIMBER LOGS

(Rates in Rupees)

TO	FROM	Gujarat Malabar		Madras		Coro- mandal	Calcutta
		Per cu.M.	Per Cu.M.	Per tonne	Per cu.M.	Per Cu.M.	Per Cu.M.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Gujarat Ports . . . . .		134.80	138.60	99.70	149.90	149.90*	
2. Bombay . . . . .		75.10	111.90	91.90	66.00	134.40	108.10*
3. Other Maharashtra Ports . . . . .		112.70**		109.40	78.90		169.50
4. Mormugao . . . . .		112.70**		109.40	78.90		169.50
5. Mangalore . . . . .		112.70**		109.40	78.90		169.50
6. Other Mysore Ports . . . . .		112.70**		109.40	78.90		169.50
7. Malabar Ports . . . . .				109.40	78.90		169.50
8. Tuticorin . . . . .				91.90	66.00		113.00*
9. South Madras Ports . . . . .				91.90	66.00		108.10*
10. Madras . . . . .							83.30*
11. Coromandal Ports . . . . .				91.90	66.00		81.30*
12. Visakhapatnam . . . . .				91.90	66.00		81.30*
13. Calcutta . . . . .				91.90	66.00		

\* Timber squares, scantlings and planks.

\*\* Rs. 11.00 per cubic metre extra if transhipped at Bombay.

Note.—All the above rates are subject to a bunker surcharge of Rs. 6.50 per tonne or cubic metre.

TABLE No. 15(12)--(Contd.)

## RUBBER

(Rates in Rupees)

TO FROM	Bombay		Maharashtra		Mormugao		Mysore		Malabar	
	Per tonne	Cu. M.	Per tonne	Cu. M.	Per tonne	Cu. M.	Per tonne	Cu. M.	Per tonne	Cu. M.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Gujarat Ports										
2. Bombay										
3. Other Ma- harashtra Ports										
4. Mormugao										
5. Mangalore										
6. Other Mys- ore Ports										

TABLE No. 15(12)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
7. Malabar Ports	81.00	73.00							91.90	82.20
8. Tuticorin.										
9. South Malabar Ports.	91.90	82.20	91.90	82.20	91.90	82.20	91.90	82.20	91.90	82.20
10. Madras	65.10	58.40	91.90	82.20	91.90	82.20	91.90	82.20	91.90	82.20
1. Cochin del Ports.	80.20	71.90	128.60	115.20	128.60	115.20	128.60	115.20	128.60	115.20
2. Visakhapatnam	80.20	71.90	128.60	115.20	128.60	115.20	128.60	115.20	128.60	115.20
3. Calcutta	82.20	73.80	138.60	124.80	138.60	124.80	138.60	124.80	138.60	124.80

NOTE.—All the above rates are subject to a bunker surcharge of Rs. 6.30 per tonne or cubic metre.

TABLE No. 15(12)—Contd.

## TEA

(Rates in Rupees)

TO	FROM	Tea in cases per Cu.m.			Tea in bags per tonne
		Gujarat	Malabar	Calcutta	Calcutta
	(1)	(2)	(3)	(4)	(5)
1.	Gujarat Ports . . . . .		128.60	71.90	349.40
2.	Bombay . . . . .	39.30	83.80	53.80	198.30
3.	Other Maharashtra Ports . . . . .			97.20	239.70
4.	Mormugao . . . . .			97.20	239.70
5.	Mangalore . . . . .	59.00*			
6.	Mysore Ports . . . . .			97.20	239.70
7.	Malabar Ports . . . . .			97.20	239.70
8.	Tuticorin . . . . .			89.40	218.70
9.	South Madras Ports . . . . .			69.70	198.30
10.	Madras . . . . .			53.80	149.90
11.	Coromandel Ports . . . . .			58.80	162.40
12.	Visakhapatnam . . . . .			58.80	162.40
13.	Calcutta . . . . .				

Note—All the above rates are subject to bunkersurcharge of Rs. 6.30 per tonne or cu.m.

\*Rs. 11.00 per cu.m. extra in case of transhipment at Bombay.



TABLE No. 15(12)—Contd.

(Rates in Rupees per tonne)

TO	FROM	COCONUT				COPRA	
		Maha- rashtra	Mormu- gao	Mysore	Malabar	Coro- mandal	Cal- cutta
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Gujarat Ports				6.70*	207.90	234.60	
2. Bombay				6.90*	152.70	149.90	
3. Other Maharashtra Ports.					189.10	233.30	
4. Mormugao					189.10	233.30	
5. Mangalore					189.10	233.30	
6. Other Mysore Ports					189.10	233.30	
7. Malabar Ports					189.10	233.30	
8. Tuticorin					207.90	212.40	
9. South Madras		91.90	91.90	91.90	91.90	194.10	198.30
10. Madras		91.90	91.90	91.90	91.90	152.70	149.90
11. Coromandel Ports		128.60	128.60	128.60	128.60	152.70	149.90
12. Visakhapatnam		128.60	128.60	128.60	128.60	152.70	149.90
13. Calcutta		138.60	138.60	138.60	138.60	140.30	

\*Per bag weighing upto 90 kg.

Note.—All the above rates are subject to a bunker surcharge of Rs. 6.30 per tonne.

TABLE NO. 15(12)—Contd.

## GENERAL CARGO

(Rates in Rupees)

TO	FROM	Gujarat		Bombay	
		Per tonne	Per Cu.m.	Per tonne	Per Cu.m.
(1)		(2)	(3)	(4)	(5)
1. Gujarat Ports .		85-00	75-90	85 00	75-90
2. Bombay . .		85-00	75-90		
3. Other Maharashtra Ports . . .		127-50*	113-90*	85-00	75-90
4. Mormugao . .		127-50*	113-90*	85-00	75-90
5. Other Mysore Ports . . .		127-50*	113-90*	85-00	75-90
6. Mangalore . .		127-50*	113-90*	85-00	75-90
7. Malabar Ports .		09 70	80-50	68-10	61-00
8. Tuticorin . .		124-00	111-00	91-90	82-20
9. South Madras Ports . . .		110-10	106-00	91-90	82-20
10. Madras . . .		91-90	82-20	65-10	50-40
11. Coromandel Ports .		109-40	90 60	80 20	71-90
12. Visakhapatnam .		109-40	98 60	80-20	71 90
13. Calcutta . .		104-30	93-00	82-20	73-80

\*Rs. 11-00 per tonne or Cu m. extra in case of transhipment at Bombay

NOTE:—(i) All the above rates are subject to a bunker surcharge of Rs. 6-30 per tonne or cubic metre.

(ii) Freight rates for fuel oil, petrol, crude, [diesel] and sulphur are double that of general cargo rates

TABLE No. 15(12)—Contd  
GENERAL CARGO—Contd,

(Rates in Rupees)

TO	FROM	Maharashtra		Mormugao	
		Per tonne	Per Cu m.	Per tonne	Per Cu.m.
	(1)	(6)	(7)	(8)	(9)
1. Gujarat Ports . . .		127.50*	113.90*	127.50*	113.90*
2. Bombay . . . . .		85.00	75.90	85.00	75.90
3. Other Maharashtra Ports . . .		85.00	75.90	85.00	75.90
4. Mormugao . . . . .		85.00	75.90		
5. Other Mysore Ports . . . . .		85.00	75.90	85.00	75.90
6. Mangalore . . . . .		85.00	75.90	85.00	75.90
7. Malabar Ports . . . . .		91.90	82.20	91.90	82.20
8. Tuticorin . . . . .		103.50	94.00	103.50	94.00
9. South Madras Ports . . . . .		91.90	82.20	91.90	82.20
10. Madras . . . . .		91.90	82.20	91.90	82.20
11. Coromandel Ports . . . . .		128.60	115.20	128.60	115.20
12. Visakhapatnam . . . . .		128.60	115.20	128.60	115.20
13. Calcutta . . . . .		138.60	124.80	138.60	124.80

\*Rs. 11.00 per tonne or Cu m extra in case of transshipment at Bombay.  
Notes— (i) All the above rates are subject to a bunker surcharge of Rs. 6.30 per tonne or cubic metre.

(ii) Freight rates for fuel oil, petrol, crude, diesel and sulphur are double that of general cargo rates.

TABLE No. 15(12)—Contd.  
GENERAL CARGO—Contd.

(Rates in Rupees)

TO	FROM	Malabar		Tuticorin	
		Per tonne	Per Cu m.	Per tonne	Per Cu m.
	(1)	(10)	(11)	(12)	(13)
1. Gujarat Ports	.	118.10	106 00	150.30	134.00
2. Bombay	. .	93.50	83.80	115.20	103.99
3. Other Maharashtra Ports	. . .	91.90	82.20	103.50	94.00
4. Mormugao	. .	91.90	82.20	103.50	94.00
5. Other Mysore Ports		91.90	82.20	103.50	94.00
6. Mangalore	. .	91.90	82.20	103.50	94.00
7. Malabar Ports	.	40.60	27.50	91.90	82.20
8. Tuticorin	. .	91.90	82.20	—	—
9. South Madras Ports		91.90	82.20	91.90	82.20
10. Madras	. .	91.90	82.20	91.90	82.20
11. Coromandel Ports	. .	128.60	115.20	130.60	117.20
12. Visakhapatnam	.	128.60	115.20	130.60	117.20
13. Calcutta	. .	138.60	124.80	138.60	124.80

\*Rs. 11.00 per tonne or cu m. extra in case of transshipment at Bombay

Notes.—(i) All the above rates are subject to a bunker surcharge of Rs. 6.30 per tonne or cubic metre.

(ii) Freight rates for fuel oil, petrol, crude, diesel and sulphur double that of general cargo rates.

TABLE No. 15(12)—Contd.

## GENERAL CARGO—(Contd.)

(Rates in Rupees)

TO	FROM	Madras		Coromandel		Calcutta	
		Per tonne	Per Cu.m.	Per tonne	Per Cu.m.	Per tonne	Per Cu.m.
(1)		(14)	(15)	(16)	(17)	(18)	(19)
1. Gujarat Port	.	138.60	99.70	124.80	89.40	140.70	100.50
2. Bombay	.	91.90	66.00	91.90	66.00	89.70	64.50
3. Other Maharashtra Ports	.	109.40	78.90	113.00	81.30	139.80	100.20
4. Mormugao	.	109.40	78.90	113.00	81.30	139.80	100.20
5. Other Mysore Ports	.	109.40	78.90	113.00	81.30	139.80	100.20
6. Mangalore	.	109.40	78.90	113.00	81.30	139.80	100.20
7. Malabar Ports	.	109.40	78.90	113.00	81.30	139.80	100.20
8. Tuticorin	.	91.90	66.00	124.80	89.40	127.80	91.90
9. South Madras Ports	.	91.90	66.00	116.00	83.50	118.90	84.40
10. Madras	.	—	—	91.90	66.00	89.70	64.50
11. Coromandel Ports	.	91.90	66.00	91.90	66.00	89.70	64.50
12. Visakhapatnam	.	91.90	66.00	91.90	66.00	89.70	64.50
13. Calcutta	.	91.90	66.00	83.80	60.50	—	—

\* Rs. 11.00 per tonne or cu m. extra in case of transhipment at Bombay.

NOTES—(i) All the above rates are subject to a bunker surcharge of Rs. 6.50 per tonne or cubic metre.

(ii) Freight rates for fuel oil, petrol, crude, diesel and sulphur are double that of general cargo rates.

TABLE No. 15(12)—*Contd.*

## COTTON PIECE GOODS

( Rates in Rupee )

TO	FROM	Gujarat		Bombay	
		Per tonne	Per Cu m	Per tonne	Per Cu m
(1)		(2)	(3)	(4)	(5)
1. Gujarat Ports .		100 00	—	100 00	—
2. Bombay . . .		100.00	—	..	—
3. Other Maharashtra Ports		150 00*	—	100 00	—
4. Mormugao . . .		150 00*	—	100 00	—
5. Mangalore . . .		150 00*	—	100 00	—
6 Other Mysore Ports		150 00*	—	100 00	—
7. Malabar Ports .		—	88 60	75 40	67 60
8. Tuticorin . . .		—	88 60	76 40	68 40
9 South Madras Ports		—	106 00	—	82.20
10 Madras . . . .		—	82.20	—	58 40
11 Coromandel . . .		—	98 60	—	59 70
12. Visakhapa nam .		—	98 60	—	59 70
13 Calcutta . . . .		—	93.00	—	67.60

\* Rs. 11-00 per tonne or cu m extra in case of transshipment at Bombay

NOTE—All the above rates are subject to a bunker surcharge of Rs 6.30 per tonne or cu m.

TABLE No. 15(17)—Contd.  
COTTON PIECE GOODS—(Contd.)

(Rate in Rupees)

TO	FROM	Maharashtra		Mysore	
		Per tonne	Per Cwt.	Per tonne	Per Cwt.
(1)		(6)	(7)	(8)	(9)
1. Gujarat Ports	.	152.00*	—	155.00*	—
2. Bombay	.	102.00	—	100.00	—
3. Other Maharashtra Ports		105.00	—	100.00	—
4. Mormugao	.	100.00	—	100.00	—
5. Mangalore	.	100.00	—	100.00	—
6. Other Mysore Ports		100.00	—	100.00	—
7. Malabar Ports	.	—	82.20	—	82.20
8. Tuticorin	.	—	94.00	—	94.00
9. South Madras Ports		—	82.20	—	82.20
10. Madras	.	—	82.20	—	82.20
11. Coromandel	.	—	115.20	—	115.20
12. Visakhapatnam	.	—	115.20	—	115.20
13. Calcutta	.	—	124.80	—	124.80

TABLE No. 15(12)—Contd.  
COTTON PIECE GOODS—(Contd.)

(Rates in Rupees)

TO	FROM	Mysore		Malabar	Tuticorin
		Per tonne	Per Cu. m.	Per Cu.m.	Per Cu.m.
(1)		(10)	(11)	(12)	(13)
1. Gujarat Ports		150.00*	—	106.00	134.80
2. Bombay		100.00	—	83.80	103.00
3. Other Maharashtra Ports		100.00	—	82.20	94.00
4. Mormugao		100.00	—	82.20	94.00
5. Mangalore		100.00	—	82.20	94.00
6. Other Mysore Ports		100.00	—	82.20	94.00
7. Malabar Ports		—	82.20	37.50	82.20
8. Tuticoria		—	94.00	82.20	—
9. South Madras Ports		—	82.20	82.20	82.20
10. Madras		—	82.20	82.20	82.20
11. Coromandel		—	115.20	115.20	117.20
12. Visakhapatnam		—	115.20	115.20	117.20
13. Calcutta		—	124.80	124.80	69.80



TABLE No. 15(12)—*Contd.*  
**COTTON PIECE GOODS—(Cont'd)**  
 (Rates in Rupees)

TO	FROM	South Madras	Coroman- del	Madras	Calcutta
		Per Cu m.	Per Cu m.	Per Cu m.	Per Cu m.
	(1)	(14)	(15)	(16)	(17)
1. Gujarat Ports . . .		112.20	89.40	89.40	100.50
2. Bombay . . .		70 90	66 00	60.50	64.30
3. Other Maharashtra Ports .		78.90	01.30	71.90	100.20
4. Mormugao . . .		70 90	81.30	71.90	100.00
5. Mangalore . . .		70 90	81.30	71.90	100.20
6. Other Mysore Ports .		78.90	81.30	71.90	100.20
7. Malabar Ports . . .		78 90	81 30	71.90	100.20
8. Tuticorin . . .		66 00	09.40	60 50	91.90
9. South Madras Ports .		66 00	83 50	60.50	84.40
10. Madras . . .		66 00	66 00	—	64.30
11. Coromandel . . .		85 10	66.00	60.50	64.30
12. Visakhapatnam . . .		85.10	66.00	60.50	64.30
13. Calcutta . . .		93.50	60 50	45.90	—

\*Rs 11 00 per tonne or cu m extra in case of transshipment at Bombay.

NOTE.—All the above rates are subject to a bunker surcharge of Rs 6.30 per tonne or cu m.

TABLE No. 15(12)—Contd.

## FISH

(Rates in Rupees)

TO	FROM	Gujarat	Bombay	Maha- rashtra	Mor- mugao
		Per tonne	Per tonne	Per tonne	Per tonne
(1)		(2)	(3)	(4)	(5)
1. Gujarat Ports . . . .		85.00	85.00		
2. Bombay . . . . .		85.00			
3. Other Maharashtra Ports . .		127.50*	85.00		
4. Mormugao . . . . .		127.50*	85.00		
5. Mangalore . . . . .		127.50*	85.00		
6. Other Mysore Ports . . . .		127.50*	85.00		
7. Malabar Ports . . . . .			104.80		
8. Tuticorin . . . . .			141.10		
9. South Madras Ports . . . .				138.60	138.60
10. Madras . . . . .		212.00	175.00	138.60	138.60
11. Coromandel Ports . . . .				194.10	194.10
12. Visakhapatnam . . . . .				194.10	194.10
13. Calcutta . . . . .		334.00	261.00	205.70	205.70

\*Rs 11.00 per tonne or cu m. extra in case of transshipment at Bombay.

Note.—All the above rates are subject to a bunker surcharge of Rs. 6.30 per tonne or cubic metre.

TABLE No. 15(12)—Contd.

## FISH—Contd.

(Rates in Rupees)

TO	FROM	Mysore	Malabar	South Madras	Madras	
		per tonne	Per tonne	Per tonne	Per tonne	Per Cumm.
	(1)	(6)	(7)	(8)	(9)	(10)
1. Gujarat Ports .				210-80	138-60	99-70
2. Bombay . .			138-60	165-40	91-90	66-00
3. Other Maharashtra Ports . . .			109-40	145-30	109-40	78-80
4. Mormugao . .			109-40	145-30	109-40	78-90
5. Mangalore . .			109-40	145-30	109-40	78-90
6. Other Mysore Ports			109-40	145-30	109-40	78-50
7. Malabar Ports .				145-30	109-40	78-90
8. Tuticorin . .			109-40	145-30	91-90	66-00
9. South Madras Ports		138-60	138-60	109-40	91-90	66-00
10. Madras . . .		138-60	138-60	109-40		
11. Cochin Ports		194-10	194-90	130-60	91-00	66-00
12. Visakhapatnam .		194-10	194-10	130-60	91-00	66-00
13. Calcutta . .		205-70	205-70	165-40	91-90	66-00

\*Rs. 11-00 per tonne or cumm. extra in case of transshipment at Bombay.

Note.—All the above rates are subject to a bunker surcharge of Rs. 6-30 per tonne or cubic metre.

TABLE No. 15(12)—Contd.

## FOODGRAINS

(Rates in Rupees per tonne)

TO	FROM	Gujarat	Bombay	Mahara- shtra	Mormu- gaon	Mysore	Malabar
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Gujarat		80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*
2. Bombay		80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*
3. Other Maharashtra Ports		80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*
4. Mormugao		80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*
5. Mangalore		80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*
6. Other Mysore Ports		80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*
7. Malabar Ports		80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*
8. Tuticorin		80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*	80.00 52.70*
9. South Madras Ports		64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS
10. Madras		64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS
11. Coromandel		64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS
12. Visakhapatnam		64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS
13. Calcutta		64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS	64.40* FIOS

NOTE.—1. All the above rates are subject to a bunker surcharge of Rs. 6.00 per tonne or cu.m. except the rates marked by asterisk.

2. The rates under columns 2 to 8 are as follows:

Rs. 80.00 on liner terms.

52.70 on C/P Terms.

TABLE No. 15(12)—Contd.

## FOODGRAINS—Contd.

(Rates in rupees per tonne)

TO	FROM	Tuti- corin	South Madras	Madras	Coro- mandel	Calcutta
	(1)	(8)	(9)	(10)	(11)	(12)
	Gujarat . .	80-00 52-70*	138-60		121-90	130-60
	Bubay . .	80-00 52-70*	100-20	74-60	83-80	74-60
	Port of Maharashtra . .	80-00 52-70*	77-20	65-10	65-10	65-10
	Bubay . .	80-00 52-70*	77-20	65-10	65-10	65-10
	Other Mangalore . .	80-00 52-70*	77-20	65-10	65-10	65-10
	6. Other Mysore Ports . .	80-00 52-70*	77-20	65-10	65-10	65-10
	7. Malabar Ports . .	80-00 52-70*	77-20	65-10	65-10	65-10
	8. Tuticorin . .	80-00 52-70*	66-40		56-80	74-60
	9. South madras Ports . .	64-40* FIOS	38-00	53-80	68-40	67-20
	10. Madras . .	64-40* FIOS	38-00		41-80	51-80
	11. Coromandel . .	64-40* FIOS	83-80		45-90	73-90
	12. Visakliapatnam . .	64-40* FIOS	83-80		45-90	73-00
	13. Calcutta . .	64-40* FIOS	73-80	51-80	45-90	

Notes.—1. All the above rates are subject to a bunker surcharge of Rs. 6-30 per tonne or cum. except the rates marked by asterisk.

2. The rates under columns 2 to 8 are as follows :

Rs. 80-00 on liner terms.

Rs. 52-70 on C/P Terms.

# MANURES

(Rupees per tonne)

TO	FROM	Gujarat	Bombay	Maha- rashtra	Morm- ugao	Mysore	Per Tonne
1	(2)	(3)	(4)	(5)	(6)	(7)	
1. Gujarat Ports	44-00	44-00	66-00*	66-00*	66-00*	51-90	
2. Bombay	44-00	—	44-00	44-00	44-00	34-60	
3. Other Maharashtra Ports	66-00*	44-00	44-00	44-00	44-00	—	
4. Mormugao	66-00*	44-00	44-00	44-00	44-00	91-90	
5. Mangalore	66-00*	44-00	44-00	44-00	44-00	91-90	
6. Other Mysore Ports	66-00*	44-00	44-00	44-00	44-00	91-90	
7. Malabar Ports	59-70	44-60	74-60	74-60	74-60	—	
8. Tuticorin	73-80	56-80	86-40	86-40	86-40	91-90	
9. South Madras Ports	86-80	67-50	91-90	91-90	91-90	91-90	
10. Madras	73-00	55-50	71-90	71-90	71-90	71-90	
11. Coromandel	80-50	80-20	75-40	75-40	75-40	75-40	
12. Visakhapatnam	80-50	80-20	75-40	75-40	75-40	75-40	
13. Calcutta	86-80	73-00	75-40	75-40	75-40	75-40	

\*Rs. 11-00 per tonne or cubic metre extra in case of transshipment at Bombay.

NOTE.—All the above rates are subject to a bunker surcharge of Rs. 6-30

TABLE No. 15(12)—Contd.

## MANURES—Contd.

(Rates in Rupees per tonne)

TO	FROM	Tuti- corin	South Madras	Madras	Coro- mandel	Calcutta
	(1)	(8)	(9)	(10)	(11)	(12)
1. Gujarat Ports	.	149.50	140.70	100.20	124.80	140.70
2. Bombay	.	115.20	100.20	55.40	83.80	89.70
3. Other Maharashtra Ports	.	103.50	100.20	68.10	100.20	139.80
4. Mormugao	.	103.50	100.20	68.10	100.20	139.80
5. Mangalore	.	103.50	100.20	68.10	100.20	139.80
6. Other Mysore Ports	.	103.50	100.20	68.10	100.20	139.80
7. Malabar Ports	.	91.90	100.20	68.10	100.20	139.80
8. Tuticorin	.	—	83.80	68.10	116.00	127.80
9. South Madras Ports	.	68.10	66.40	75.40	108.60	118.90
10. Madras	.	68.10	73.00	—	83.80	95.00
11. Coromandel	.	91.90	97.20	53.80	83.80	89.70
12. Visakhapatnam	.	91.90	97.20	53.80	83.80	89.70
13. Calcutta	.	100.20	107.10	51.80	83.80	—

\* Rs. 11.00 per tonne or cubic metre extra in case of transshipment at Bombay.

Note.—All the above rates are subject to a bunker surcharge of Rs. 6.30 per tonne.

TABLE No. 15 (12)—Contd.

## GUNNIES

(Rates in Rupees)

TO	FROM	Gujarat		Maharashtra		Mormugao	
		Per tonne	Per Cu.m.	Per tonne	Per Cu.m.	Per tonne	Per Cu.m.
(1)		(2)	(3)	(4)	(5)	(6)	(7)
1. Gujarat Ports		58.00	34.60	87.00*	51.90*	87.00*	51.90
2. Bombay		58.00	34.60	58.00	34.60	58.00	34.60
3. Other Maharashtra Ports		87.00*	51.90*	58.00	34.60	58.00	34.60
4. Mormugao		87.00*	51.90*	58.00	34.60	—	—
5. Mangalore		87.00*	51.90*	58.00	34.60	58.00	34.60
6. Other Mysore Ports		87.00*	51.90*	58.00	34.60	58.00	34.60
7. Malabar Ports		89.70	80.50	—	—	—	—
8. Tuticorin		124.00	111.00	—	—	—	—
10. South Madras Ports		118.10	106.00	—	82.20	(NEW)	82.20 (NEW)
11. Madras		91.90	82.20	—	82.20	(NEW)	82.20 (NEW)
12. Coromandel		109.40	98.60	—	115.20	(NEW)	115.20 (NEW)
13. Visakhapatnam		109.40	98.60	—	115.20	(NEW)	115.20 (NEW)
14. Calcutta		104.30	93.00	—	124.60	(NEW)	124.80 (NEW)

\*Rs.11.00 per tonne or cu.m. extra in case of transshipment at Bombay.

\*\*Surcharge of Rs.2.00 per cu.m. extra.

Note.—All the above rates are subject to a bunker surcharge of Rs.6.30 per tonne or cu.m.



TABLE No. 15(12)—Contd.

## GUNNIES

(Rates in Rupees)

TO	FROM	Mysore		Malabar		Coro- mandel	Calcu- tta
		Per tonne	Per Cu.m.	Per tonne	Per Cu.m.	Per Cu.m.	Per Cu.m.
	(1)	(8)	(9)	(10)	(11)	(12)	(13)
1. Gujarat Ports	.	87.00*	51.90*	118.10	106.00	98.90	78.30*
2. Bombay	.	58.00	34.60	93.50	83.80	53.80	69.20*
3. Other Maharashtra Ports	.	58.00	34.60	91.90	82.20	98.90	99.40*
4. Mormugao	.	58.00	34.60	91.90	82.20	98.90	99.40*
5. Mangalore	.	58.00	34.60	91.90	82.20	98.90	99.40*
6. Other Mysore Ports	.	58.00	34.60	91.90	82.20	98.90	99.40*
7. Malabar Ports	.	—	—	—	—	98.90	99.40*
8. Tuticorin	.	—	—	91.90	82.20	98.90	92.90*
9. South Madras Ports	.		82.20 (NEW)		82.20 (NEW)	83.50	88.30*
10. Madras	.		82.20 (NEW)		82.20 (NEW)	46.80	69.30*
11. Coromandel	.		115.20 (NEW)		115.20 (NEW)	58.80	67.40*
12. Visakhapatnam	.		115.20 (NEW)		115.20 (NEW)	58.80	67.40*
13. Calcutta	.		124.80 (NEW)		124.80 (NEW)	58.80	—

\*Rs.11.00 per tonne or cu.m. extra in case of transshipment at Bombay

\*\*Surcharge of Rs.2.00 per cu.m. extra.

NOTE.—All the above rates are subject to a bunker surcharge of Rs.6.50 per tonne or cu.m.

TABLE No. 15(12)—Contd.

## JUTE AND JUTE PRODUCTS

(Rates in Rupees)

TO	FROM	jute goods (NOE)	jute pressed		jute unpressed		jute Waste
		Gujarat (Per tonne)	Gujarat (Per tonne)	Calcu- tta (Per Cu m.)	Gujarat (Per tonne)	Calcu- tta (Per tonne)	Calcu- tta (Per Cu.m.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Gujarat Ports	.	..	..	101.50		253.90	
2. Bombay	.	58.00*	58.00*	63.30	116.00*	168.70	
3. Other Maharashtra Ports	.			69.90		252.50	
4. Mormugao	.			69.90		252.50	
5. Mangalore	.	87.00*	87.00**		174.00*		
6. Mysore Ports	.			69.90		252.50	
7. Malabar Ports	.			69.90		252.50	
8. Tuticorin	.			88.30		230.20	
9. South Madras Ports	.			83.10		217.70	
10. Madras	.			63.30		168.70	56.60
11. Coromandel Ports	.			63.30		86.90	
12. Visakhapatnam	.			63.30		86.90	
13. Calcutta	.						

\*Not subject to surcharge of Rs.2.00

\*\*Rs 11.00 per tonne/cu m. extra in case of transhipment at Bombay

NOTE—All the above rates are subject to bunker surcharge of Rs.6.30 per tonne or cu m. as also further surcharge of Rs 2.00 per tonne/cu.m.

TABLE No. 15(12)—Contd.:-

## JUTE AND JUTE PRODUCTS:

(Rates in Rupees)

TO	FROM	Jute Old	Jute	twine	in	bags	Jute twine Jute Canva and webbing Calcutta (Per tonne)
		Calcutta (Per tonne)	Calcutta (Per tonne)	Coromandel			
	(1)			Per tonne	Per cu.m.		
1. Gujarat Ports		(8)	(9)	(10)	(11)		(12)
2. Bombay							
3. Other Ports		250.10	253.20	249.70*	89.40*		78.30
Portway		158.20	168.00	183.20*	66.00*		69.20
4. Other Maharashtra Ports		270.30	251.50	226.70*	81.30*		99.40
4. Mormugao		270.30	251.50	226.70*	81.30*		99.40
5. Mangalore							99.40
6. Mysore Ports		270.30	251.50	226.70*	81.30*		99.40
7. Malabar Ports		270.30	251.50	226.70*	81.30*		99.40
8. Tuticorin		215.50	230.90	249.70*	89.40*		92.50
9. South Madras Ports		235.50	216.70	233.20*	83.50*		88.50
10. Madras		158.20	168.00	151.10*	54.30*		63.50
11. Coromandel Ports		158.20	160.00	183.20*	66.00*		67.80
12. Visakhapatnam		158.20		183.20*	66.00*		67.40
13. Calcutta				167.80*	60.50*		

\*Not subject to surcharge of Rs.2.00.

\*\*Rs.11.00 per tonne/cu.m. extra in case of transshipment at Bombay.

Note.—All the above rates are subject to bunker surcharge of Rs.6.30 per tonne or cu.m. as also further surcharge of Rs.2.00 per tonne/cu.m.

TABLE No. 15(13)

### NAUTICAL DISTANCES BETWEEN SELECTED INDIAN PORTS

(In Nautical Miles)

From/To	Kandla Bom-	Man- bay	Mor- mugao	Man- galore	Co- chin	Tuti- corin	Mad- ras	Visa- khapa-	Para- deep	Hal- dia	Cal- cutta
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Kandla	.	.	.	433	613	623	968	1269	1862	2120	2502
Navlakhi	.	.	35	440	620	975	1859	2127			2509
Bedl	.	.	33	418	598	560	953	1206	1837	2105	2487
Sikka	.	.	.	.	.	.	.	.	.	.	.
Okha	.	.	77	321	519	676	869	1089	1740	1997	2270
Porbander	.	.	176	244	444	602	795	1015	1668	1925	2198
Veraval	.	.	241	198	392	384	743	1009	1627	1895	2240
Bhavnagar	.	.	408	200	410	403	770	1019	1601	1921	2277
Arundla	.	.	.	.	.	.	.	.	.	.	2303
Thana	.	.	.	.	.	.	.	.	.	.	.
Elephanta	.	.	.	.	.	.	.	.	.	.	.

jute  
Waste

Calcu- tta (Per tonne)	Calcu- tta (Per Cu.m.)
(6)	(7)

TABLE No. 15(13)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Hombay . . .	133	..	223	388	580	803	1453	1707	..	..	1980
Mora . . .	..	..	..	..	..	..	..	..	..	..	..
Ratnagiri . . .	633	180	13	..	421	657	1410	1760	..	..	2225
Redi . . .	..	..	..	..	..	..	..	..	..	..	..
Mormugao . . .	613	223	..	170	360	583	1233	1487	..	..	1760
Karwar . . .	..	..	..	..	..	..	..	..	..	..	..
Belkeri . . .	..	..	..	..	..	..	..	..	..	..	..
Honavar . . .	..	..	..	..	..	..	..	..	..	..	..
Coondapoor . . .	..	..	..	..	..	..	..	..	..	..	..
Malpe . . .	..	..	..	..	..	..	..	..	..	..	..
Mangalore . . .	623	388	170	..	191	111	1061	1315	..	..	1588
Azhikhal . . .	..	..	..	..	..	..	..	..	..	..	..
Calicut . . .	..	500	280	111	83	311	966	1220	..	..	1493
Cochin . . .	968	580	360	191	..	225	883	1137	..	..	1410
Alleppey . . .	..	610	390	221	30	195	853	1107	..	..	1380
Koilkottam . . .	..	..	..	..	..	..	..	..	..	..	..
Quilon . . .	..	651	431	263	73	154	814	1058	..	..	1541
Rolachel . . .	..	713	490	325	132	93	745	1009	..	..	1282

TABLE No. 15(13)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Tuticorin	...	803	583	414	225	...	728	992	...	...	126
Pamban	...	...	...	...	...	...	...	...	...	...	...
Kilakatai	...	...	...	...	...	...	...	...	...	...	...
Nagapattinam	...	1325	1105	933	735	610	139	461	...	...	78
Cuddalore	...	1376	1156	984	806	661	90	416	...	...	740
Pondicherry	...	1307	1167	995	817	672	77	405	...	...	728
Madras	...	1832	1453	1233	1061	883	728	...	328	...	655
Krishnapatnam	...	...	...	...	...	...	...	...	...	...	...
Machlipatnam	...	...	...	...	...	...	...	...	...	...	...
Kakinada	...	...	...	...	...	...	...	...	...	...	...
Visakhapatnam	...	2120	1707	1487	1315	1137	992	328	...	...	340
Bhimuniapatnam	...	...	...	...	...	...	...	...	...	...	...
Kalingapatnam	...	...	1754	1534	1362	1184	1039	384	63	...	282
Gopalpur	...	...	1819	1599	1427	1248	1103	454	134	...	213
Puri	...	...	1363	1643	1471	1293	1148	511	194	...	154
Paradeep	...	...	...	...	...	...	...	...	...	...	...
Chandbali	...	...	...	...	...	...	...	...	...	...	...
Haldia	...	...	1925	1705	1533	1355	1210	600	285	...	...
Calcutta	...	2502	1920	1760	1588	1410	1265	655	340	...	...

OF COAL,  
PORTS.

TABLE No. 15(14)

## RAIL-DISTANCES BETWEEN IMPORTANT PORTS ON THE COAST (11) (12)

(In

980

From/To	Kan- dla	Bom- bay	Mor- mugao	Man- galore	Co- chin	Tuti- corin	Mad- ras	Visa- kha- patnam	Para- deep	Hal- dla	Cal- cutta
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. Kandla	...	...	...	...	...	...	...	...	...	...	...
2. Bombay	804	...	...	...	...	...	...	...	...	...	...
3. Mormugao	1534	780	...	...	...	...	...	...	...	...	...
4. Mangalore*	2072	1268	768	...	...	...	...	...	...	...	...
5. Cochin	2696	2147	1647	428	...	...	...	...	...	...	...
6. Tuticorin	...	...	1168	453	393	...	...	...	...	...	...
7. Madras	2087	1283	934	896	714	651	...	...	...	...	...
8. Visakhapatnam	2119	1695	1288	1638	1444	1431	780	...	...	...	...
9. Paradeep	...	2346	1843	2190	1998	1985	1334	558	...	...	...
10. Haldia.	2418	1968	2167	2515	2323	2311	1659	879	493	...	...
11. Calcutta	2418	1968	2167	2515	2323	2311	1659	879	493	142	...

\*The Hisan-Mangalore route (under construction) has been taken into account wherever, it was considered to be the shortest.

TABLE No. 15(15)

## RAILWAY FREIGHT RATES FOR THE MOVEMENT OF COAL, SALT, CEMENT AND TIMBER BETWEEN IMPORTANT PORTS.

(As on 1st April, 1973)

Port tonnes taken	Rail distances (In Kms.)	Freight Rates					Calcutta (Per tonne)	Calcutta (Per Cu-m.)
		Hard Coke	Other Coal	Salt	Cement	Waste		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(6)	(7)
Kandla to Bombay	804	37.20	33.80	41.80	46.80	33.80		
Bombay to Mormugao	780	35.70	32.45	40.10	47.30	40.70		
Mormugao to Mangalore*	768	35.40	32.15	38.70	46.80	33.80		
Mangalore to Cochin	428	23.05	20.95	26.20	30.70	33.80		
Cochin to Tuticorin	393	21.95	19.95	24.90	29.20	32.10		
Tuticorin to Madras	651	31.35	28.50	35.40	41.70	45.80		
Madras to Visakhapatnam	780	35.70	32.45	40.10	47.30	52.00		
Visakhapatnam to Paradip	558	27.75	25.20	31.50	37.00	40.70		
Paradip to Haldia	493	25.60	23.25	29.10	34.20	37.60		
Haldia to Calcutta	142	12.30	11.15	13.40	15.50	17.00		

\*Via Hassan—Mangalore Rail-link under construction.



**PART-III SECTION 16 : TRANSPORT AND FIVE YEAR PLANS**

TABLE No 16(1)

## DISTRIBUTION OF FIVE YEAR PLAN OUTLAIS AND EXPENDITURE

(Rs in crores)

Sectors	First Plan		Second Plan		Third Plan		Fourth Plan	
	Act- ual	% to total	Act- ual	% to total	Act- ual	% to total	Pro- viso- nnl	% to total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>A—Public Sector :</b>								
Agriculture & C. D . . . . .	290	15	519	12	1089	13	2728	17
Irrigation* . . . . .	431	22	130	10	664	8	1037	7
Power . . . . .	119	8	452	9	1252	15	2448	15
Village & Small Industries . . . . .	42	2	187	4	236	3	293	2
Industry & Minerals . . . . .	55	3	938	20	1736	20	3938	21
Transport & Communi- cations . . . . .	518	26	1261	27	2112	24	3237	20
Social Services . . . . .	412	21	770	16	1493	17	2771	18
Miscellaneous . . . . .	60	3	85	2	%	—	—	—
Inventories . . . . .	—	—	—	—	—	—	—	—
<b>Total (A)</b> . . . . .	1960	100	4672	100	8573	100	15902	100
<b>B—Private Sector :</b>								
Agriculture Irrigation & C.D. . . . .			675	20	850	20	1600	18
Power . . . . .			40	1	50	1	75	1
Village & Small Industries . . . . .			225	7	325	8	560	6
Industry & Minerals . . . . .			725	22	1100	25	2000	22
Transport & Communi- cations . . . . .			135	4	250	6	920	10
Social Services . . . . .			1000	31	1125	26	2225	25
Inventories . . . . .			500	15	600	14	1600	18
<b>Total (B)</b> . . . . .	1600	100	3300	100	4300	100	8980	100
<b>Total (A)+(B)</b> . . . . .	3560		7972		12873		24882	

\*Including Flood Control.

%Included under social service

Expenditure in respect of inventories distributed under various heads

Source : Planning Commission .

TABLE No. 10(2)

**YEAR-WISE PLAN EXPENDITURE (ACTUAL) DURING THE THREE FIVE YEAR PLANS  
AND ANNUAL PLANS 1966-67, TO 1971-72.**

(Rs. in crores)

Heads of Development Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Agricultural & Community Development	Irrigation and Power	Industry & Mining	Transport & Communication	Social Services	Other Programmes	Total
1951-52	.	29.33	83.37	10.62	88.75	64.57	2.96	259.50
1952-53	.	29.98	97.79	9.39	63.79	63.97	2.61	257.53
1953-54	.	46.00	111.52	18.36	85.68	68.39	13.15	343.07
1954-55	.	75.79	131.41	21.51	133.75	91.13	22.32	475.92
1955-56	.	108.79	158.79	36.95	165.83	123.91	19.64	613.91
1956-57	.	69.01	162.52	81.52	216.93	87.93	14.92	632.83
1957-58	.	85.82	160.96	227.28	286.72	106.69	16.72	884.10
1958-59	.	109.16	164.71	279.34	283.89	143.64	20.70	1001.44
1959-60	.	124.87	176.57	268.85	234.14	185.51	20.57	1010.51

TABLE No. 16(2)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1960-61	.	140.14	200.90	218.56	278.07	206.47	26.89
1961-62	.	148.15	215.19	235.84	296.50	188.41	23.87*
1962-63	.	173.75	296.93	298.93	374.53	217.86	23.50
1963-64	.	207.52	381.93	391.26	459.73	214.81	28.40
1964-65	.	232.09	455.15	453.41	506.20	316.07	26.84
1965-66	.	307.13	537.52	582.60	74.73	394.52	35.49
1966-67	.	331.27	553.08	557.22	123.86	268.78	27.30
1967-68	.	313.62	511.27	513.25	397.90	290.41	28.48
1968-69	.	439.19@	589.09	566.10	400.59	325.41	35.58
1969-70 (L)	.	330.06@	654.50	484.89	410.82	278.51	31.13
1970-71	.	.	.	.	501.53	...	...
1971-72	.	.	.	...	635.01	...	...

\*Includes Rehabilitation from 3rd Plan onwards.

@Includes provision for buffer stocks.

(L) Estimated.

Source : Planning Commission.

# PLAN OUTLAYS AND EXPENDITURES ON TRANSPORT (ALL INDIA)

(Rs. in Crores)

Sector	1st Plan 1951-56		2nd Plan 1956-61		3rd Plan 1961-66		Annual Plan 1966-69		4th Plan 1969-74		1970-71	1971-72
	Out- lay	Ex- penditure	Out- lay	Ex- penditure	Out- lay	Ex- penditure	Out- lay	Ex- penditure	Out- lay	Ex- penditure	Ex- penditure	Ex- penditure
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Railways	257	217	900	723	390	1326	592	509	1050	119	161	219
(2) Roads	147	147	263	242	297	410	291	309	871	106	135	165
(3) Road Transport	37	28	45	33	37	27	46	55	92	16	19	25
(4) Ports (including minor ports)	26	19	48	53	153	93	54	53	195	29	43	54
(5) Shipping	—	—	—	—	—	40	23	32	141	22	37	21
(6) Inland Water Transport	—	—	—	—	—	4	6	6	12	2	2	4
(7) Light Houses	—	—	—	—	—	4	2	2	7	1	1	1
(8) Civil Air Transport	29	23	43	49	55	49	85	66	203	30	29	32

TABLE No. 16(4)

# DISTRIBUTION OF PLAN OUTLAYS BY MODE OF TRANSPORT (1951-1974)

Mode of Transport	Ist Plan		IIrd Plan		IVth Plan		Percentage distribution among different modes of Transport			
	Rs. in crores	Rs. in crores	Rs. in crores	Rs. in crores	Rs. in crores	Rs. in crores	Ist plan	IIrd plan	IIIrd plan	IVth plan
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		
Railways . . .	258.5	860.1	1326.0	1050.0	54.2	69.6	67.0	41.0		
Roads and Road Transport .	146.8	241.8	567.0	963.0	90.8	19.5	23.6	37.6		
Ports . . .	27.6	33.4	93.0	195.0	5.8	2.7	4.7	7.6		
Shipping . . .	10.7	17.7	40.0	111.0	3.9	3.9	2.0	5.5		
I.W.T. . .	1.9	4.2	4.0	12.0	0.4	0.3	0.2	0.4		
Civil Air Transport . .	23.2	49.0	49.0	203.0	4.9	4.0	2.5	7.9		
Total (Transport Sector) .	476.7	1236.2	1979.0	2564.0	100.0	100.0	100.0	100.0		

Source: Ist, IIrd, IIIrd and IVth Plan documents.

# FOURTH PLAN-OUTLAYS ON TRANSPORT (STATE-WISE)

(Rs. in lakhs)

State/Union Territory	Roads	Roads Transport	Ports & Harbours	TWT & Shipping	Tourism	Air Transport	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>States :</b>							
Andhra Pradesh	2207.00	200.00	50.00	15.00	5.00	—	2470.00
Assam	3527.00	607.00	—	122.00	44.00	—	4300.00
Bihar	3123.00	353.00	—	3.00	20.00	—	3504.00
Gujarat	2300.00	800.00	500.00	—	50.00	—	3550.00
Haryana	1500.00	300.00	—	—	75.00	25.00	2100.00
Jammu & Kashmir	2031.00	350.00	—	—	370.00	—	2811.00
Kerala	1125.00	550.00	210.00	30.00	50.00	—	1955.00
Madhya Pradesh	2550.00	300.00	—	—	20.00	—	2870.00
Tamil Nadu	1600.00	100.00	—	—	26.00	—	2026.00
Madhassatra	5000.00	1250.00	322.00	—	100.00	30.00	6702.00
Mysore	1200.00	100.00	125.00	—	25.00	—	1450.00
Nagaland	1053.00	125.00	—	—	25.00	—	1203.00
Orissa	1300.00	222.00	3.00	—	32.00	—	1559.00
Punjab	1514.00	800.00	—	—	30.00	25.00	2369.00
Rajasthan	850.00	50.00	—	—	50.00	—	950.00
Uttar Pradesh	5000.00	725.00	—	—	50.00	—	5775.00
West Bengal	1420.00*	135.00	—	12.00	67.00	—	1632.00
<b>Total (States)</b>	<b>37661.00</b>	<b>7467.00</b>	<b>1212.00</b>	<b>107.00</b>	<b>1039.00</b>	<b>80.00</b>	<b>47640.00</b>

\*These figure have been revised since the publication of the Fourth Plan.

TABLE No. 16(5)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Union Territories</i>							
Andaman & Nicobar Islands	425.00	38.58	236.40	83.00	3.75	—	786.73
Chandigarh	10.00	—	—	—	4.00	—	14.00
Dadra & Nagar Haveli	42.50	—	—	—	—	—	42.50
Delhi	1078.00	1000.00	—	—	—	—	2078.00
Goa	300.00	—	25.00	97.00	29.00	—	451.00
Uttar Pradesh	2800.00	157.00	—	—	75.00	—	3032.00
Laccadive & Minicoy Islands	5.00	—	5.00	—	—	—	10.00
Manipur	1008.50	80.00	—	—	2.35	—	1170.85
NEFA	555.55	—	—	—	—	43.00	598.55
Pondicherry	97.00	—	16.00	—	10.00	—	123.00
Tripura	700.00	60.00	—	—	5.00	—	765.00
<b>Total—</b>							
Union Territories	7101.55	1335.58	232.40	180.00	129.10	43.00	9071.63
<b>Grand Total</b>							
	44762.53	8802.58	1494.40	367.00	1163.10	123.00	56717.63



TABLE No. 16(6)

PLAN OUTLAYS AND EXPENDITURE ON ROADS  
(Rs. in lakhs)

State/Union Territory	1st Plan		2nd Plan		3rd Plan		1966-67		1967-68		1968-69	
	Out-lay	Expr.	Out-lay	Expr.	Out-lay	Expr.	Out-lay	Expr.	Out-lay	Expr.	Out-lay	Expr.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Total—States .	8637	9717	15077	15079	22081	25003	1057	5169	5125	5060	5038	5382
Total—Union Territories .	677	402	1333	1650	2325	2839	864	759	1001	974	1063	1232
Grand Total	9314	10179	16412	16729	24406	27842	5721	5928	6126	6034	6101	6615
	1971-72											
State/Union Territory	1969-70		1970-71		1971-72							
	Out-lay	Expr.	Out-lay	Expr.	Out-lay	Expr.						
(1)	(14)	(15)	(16)	(17)	(18)	(19)						
Total—States	4806	6249	6495	8404	9286	10295						
Total—Union Territories	1170	1507	1341	1429	937	1015						
Grand Total	5976	7756	7836	9833	10223	11310						

TABLE No. 16(7)

## PLAN OUTLAYS &amp; EXPENDITURES ON ROAD TRANSPORT (PUBLIC SECTOR)

(Rs. In lakhs)

State/Union Territory	1st Plan		2nd Plan		3rd Plan		1966-67		1967-68		1968-69	
	Out-lay	Expr.	Out-lay	Expr.	Out-lay	Expr.	Out-lay	Expr.	Out-lay	Expr.	Out-lay	Expr.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Total—States ..	862	1015	1303	1557	2044	1948	1413	1819	1370	1613	1185	1556
Total Union Territories	28	25	51	91	559	610	195	133	203	176	210	114
Grand Total	890	1040	1354	1648	2603	2588	1608	1952	1573	1789	1395	1670

State/Union Territory	1969-70		1970-71		1971-72	
	Out-lay	Expr.	Out-lay	Expr.	Out-lay	Expr.
(1)	(14)	(15)	(16)	(17)	(18)	(19)
Total—States	1098	1358	1316	1611	1815	1970
Total—Union Territories	221	214	256	352	340	505
Grand Total	1319	1572	1572	1963	2155	2475

TABLE No. 16(8)

## PLAN OUTLAY AND EXPENDITURE ON RAILWAY DEVELOPMENT PROGRAMMES

(Rs in Crores)

	Outlay			Expenditure		
	Plan Programmes	Depre- ciation	Total	Plan Programmes	Depre- ciation	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
First Plan . . .	267	163	432	217	206	423
Second Plan . . .	900	225	1125	723	320	1043
Third Plan . . .	890	350	1240	1326	360	1686
Annual Plans (1966-69)	592	310	902	509	254	763
Fourth Plan (1969-1974)	870	550	1420	—	—	—
1969-70 . . .	160	95	255	119	74	193
1970-71 . . .	180	100	280	161	91	252
1971-72 . . .	180	100	280	219	91	310

# PLAN EXPENDITURES ON INLAND-WATER TRANSPORT (1961-1974)

(Rs. in Lakhs)

Schemes	III Plan				Annual Plans				IV Plan				Anti-Out- cina- lay ted	
	1961-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74					
	Pro-Act- vi- sion	Pro-Act- vi- sion	Pro-Act- vi- sion	Pro-Act- vi- sion	Pro-Act- vi- sion	Pro-Act- vi- sion	Pro-Act- vi- sion	Pro-Act- vi- sion	Pro-Act- vi- sion	Pro-Act- vi- sion	Pro-Act- vi- sion	Pro-Act- vi- sion	Pro-Act- vi- sion	Pro-Act- vi- sion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
<b>A. Central Plan Scheme</b>	438	127	165	54	192	299	99	105	500	53	63	121	138	100
<b>B. Central sponsored Schemes.</b>	322	126	33	28	34	28	31	33	400	30	12	67	141	100
<b>C. State Plan Schemes</b>	88	56	14	23	13	25	23	31	284	68	119	239	100	101
Andhra Pradesh	5	7	5	6	7	6	7	6	15	8	10	19	21	29
Assam	—	—	—	—	—	—	—	—	8	—	—	—	—	4
Bihar	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Goa, Daman & Diu	—	—	—	—	—	8	—	10	97	13	10	14	23	45
Kerala	50	38	5	7	6	3	6	5	30	9	13	23	17	17
Tamil Nadu	—	—	—	10	—	8	10	10	—	38	86	181	35	—
West Bengal	33	11	—	—	—	—	—	—	12	—	—	2	2	4
Mizoram	—	—	—	—	—	—	—	—	—	—	—	—	—	2

TABLE No. 16(10)

## PLAN OUTLAYS AND EXPENDITURES ON PORT DEVELOPMENT

(Rs. in crores)

Name of Port	1st Plan (1956-56)		2nd Plan (1956-61)		3rd Plan (1961-66)		4th Plan (1966-68)		1969-70		1970-71		1972-73	
	Act- ual	Ex- pen- diture	Act- ual	Ex- pen- diture	Act- ual	Ex- pen- diture	Act- ual	Ex- pen- diture	Actual Expen- diture	Provi- sion*	Actual Expen- diture	Actual Expen- diture	Actual Expen- diture	Actual Expen- diture
<b>A. Major Ports</b>														
Calcutta	3.49	15.73	26.67	8.25	10.41	10.80	10.71†	11.58*	11.28	4.69	3.49	2.30	2.49	2.49
Bombay	10.92	5.22	12.94	4.39	5.60	9.01	5.52	6.35	6.38	5.52	6.35	6.38	2.25	2.25
Madras	1.35	0.99	9.19	2.32	2.72	7.46	1.30	1.25	2.22	1.30	1.25	2.22	1.19	1.19
Cochin	0.59	3.00	1.88	0.99	0.80	1.26	3.51	6.68	14.91	3.51	6.68	14.91	17.44	17.44
Visakhapatnam	1.13	4.32	9.07	1.59	1.94	3.01	0.78	0.44	0.91	0.78	0.44	0.91	1.61	1.61
Kandla	8.84	8.24	3.71	0.29	0.32	0.94	0.91	1.46	6.27	0.91	1.46	6.27	6.75	6.75
Mormugao	...	...	1.75	0.04	0.37	0.54	2.10	1.26	4.22	2.10	1.26	4.22	3.16	3.16
Paradip	...	...	19.65	2.36	1.25	3.31	2.97	4.23	3.53	2.97	4.23	3.53	3.52	3.52
Mangalore	...	...	3.02	1.50	1.00	1.70	1.82	4.00	1.90	1.82	4.00	1.90	2.83	2.83
Tuticorin	...	...	5.07	1.93	1.00	1.64	34.31	38.93	55.92	34.31	38.93	55.92	58.78	58.78
<b>TOTAL</b>	<b>26.32</b>	<b>45.50</b>	<b>92.95</b>	<b>23.66</b>	<b>25.49</b>	<b>39.67</b>	<b>34.31</b>	<b>38.93</b>	<b>55.92</b>	<b>34.31</b>	<b>38.93</b>	<b>55.92</b>	<b>58.78</b>	<b>58.78</b>

TABLE No. 16(10)—*contd.*

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>MINOR PORTS</b>										
(By maritime States)\$										
Gujarat . . .	1.36	3.03	4.69	1.17	1.23	0.82	1.48	2.06	0.91	2.10
Maharashtra . . .	0.04	0.20	1.02	0.23	0.45	0.38	0.57	0.50	1.02	0.42
Karnataka . . .	—	0.04	1.36	0.27	0.21	0.18	0.16	0.29	0.21	0.23
Kerala . . .	0.11	0.06	0.92	0.57	0.44	0.24	0.13	—	0.13	0.09
TamilNadu . . .	0.06	0.48	0.14	0.18	0.12	0.08	0.16	0.39	0.56	0.06
Pondicherry . . .	—	—	0.07	0.03	0.05	0.07	0.04	0.04	0.06	0.04
Andhra Pradesh . . .	0.05	0.07	0.47	0.18	0.02	—	0.04	0.21	0.21	0.27
<b>TOTAL</b>	<b>1.62</b>	<b>4.68</b>	<b>8.67</b>	<b>2.63</b>	<b>2.52</b>	<b>1.77</b>	<b>2.58</b>	<b>3.49</b>	<b>3.10</b>	<b>3.21</b>

\*Revised.

†Includes the expenditure for Haldia Dock Project

‡Includes the expenditure for V. O. H. P.

\$Including Expenditure incurred by the Central Govt.

Notes : In the draft Fifth Plan a provision of Rs. 308 crores had been made for the development of Major Ports of which the port Trusts are to contribute Rs. 100 crores from the own sources. For the development of Minor Ports the Plan provided Rs. 45 crores which included Rs. 22 crores in the central sector.

Source:—Port Transport Statistics—1972-73.

TABLE No. 16(11)

# PLAN TARGETS AND ACHIEVEMENTS FOR COASTAL MERCHANT FLEET (1951 to 1979)

Period	Targets in GRT (in Lakhs)	Achievements	
		No. of Ships	GRT (In Lakhs)
(1)	(2)	(3)	(4)
Position as On 1-4-1951 . . . . .	—	71	2.06
First Plan (1951-56) . . . . .	3.15	90	2.40
Second Plan (1956-61) . . . . .	4.36	97	5.14
Third Plan (1961-66) . . . . .	13.25	99	5.23
During the Inter Plan Period (1966-69) . . . . .	...	78	2.73
Fourth Plan (1969-74) . . . . .	40.00*	60	2.57
Fifth Plan (1974-79) . . . . .	95.00	62@	2.78@

\* Includes overseas Tonnage and Tonnage on order.

@ As on 30-6-74 we had 2.78 lakh GRT of coastal vessels and 32.66 lakh GRT of overseas Tonnage.

TABLE No 16(12)

# PLAN TARGETS AND ACHIEVEMENTS FOR OVERSEAS MERCHANT FLEET (1951 to 1979)

Period	Targets in GRT (In Lakhs)	Achievements	
		No. of Ships	GRT (In Lakhs)
(1)	(2)	(3)	(4)
Positions			
On 1-4-1951 . . . . .	—	23	1.67
First Plan (1951—56) . . . . .	2.85	36	2.40
Second Plan (1956—61) . . . . .	4.66	80	5.65
Third Plan (1961—66) . . . . .	13.25*	122	12.18%
During the			
Inter Plan Period (1966—69) . . . . .	..	173	18.50
Fourth Plan 1969—74 . . . . .	40.00*	214	28.34
Fifth Plan (1974—79) . . . . .	96.00*	227@	32.66@

\*Includes Coastal tonnage and tonnage on order.

% There were 99 Coastal ships represented 3.29 lakhs of GRT on that date.

@As on 30-6-74 we had 32.66 lakhs of GRT of Overseas Tonnage and 78 lakhs of GRT of coastal Tonnage.



TABLE No. 16(13)

# PROGRESS OF DIFFERENT MODES OF TRANSPORTATION (1965-66 and 1968-69 to 1971-72)

Item	Unit	1965- 1966	1968- 1969	1969- 1970	1970- 1971	1971- 1972
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>1. Rail Transport</b>						
(a) Routelength	'000'Kms.	58.4	59.6	60.1	59.8	60.1
(b) Tonnes Originating	Millions	203	204	209	197	198
(c) Tonne Kilometres	'000' million	117	125	128	127	133
(d) Passengers Originating	Millions	2082	2213	2357	2431	2536
(e) Passengers Kilometres	'000' Million	96	107	114	118	125
<b>2. Road Transport</b>						
Surfaced Road	'000'Kms.	287	393£	400£	421	472
<i>Commercial vehicles on Road</i>						
(a) Trucks	'000'Nos.	259	304	322*	343**	364**
(b) Buses	'000'No.	73	87	92*	94**	100

£Includes roads maintained by Department other than P.W.D. and Local Bodies.

\*Revised

\*\*Provisional.

TABLE No. 16(13)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Sea Transport</b>						
(a) Tonnage of Coastal Fleet	'000 GRT	323*	275*	307@	218††	198
(b) Tonnage of Overseas Fleet%	"	1492	2001	2147	2282	2416
(c) Traffic Handled by Major Ports.	Million tonnes	50	58	54	55	59
(d) Traffic handled by Minor Ports.	"	8	8	8	7	7
<b>Civil Aviation%</b>						
(a) Total Carrying Capacity in Tonne Kilometres	Million	479	670	702	709	797
(b) Total tonne Kilometres flown	"	257	353	408	439	450
(c) Total Passengers Kms. flown	"	...	2850	3235	3555	3609

\*As on 31st March.

@As on 28th Feb.

As on 30th June.

††As on 31st Dec.

%For the calendar year.

TABLE No. 16(14)

EMPLOYMENT IN PUBLIC SECTOR TRANSPORT UNDERTAKINGS  
(1955-56 to 1971-72)

(In thousand Nos.)

Year	Railways*	Road Un- dertakings	Air Trans- port Undertakings	**Other modes	Total*
(1)	(2)	(3)	(4)	(5)	(6)
1965-66 . . .	1352	232	20	489	2093
1966-67 . . .	1365	243	20	490	2118
1967-68 . . .	1363	256	21	492	2132
1968-69 . . .	1354	273	22	505	2154
1969-70 . . .	1359	304	22	495	2180
1970-71 . . .	1374	277	23	473@	2147
1971-72 . . .	1391	294	25	546@	2256

\*Revised.

\*\*Data in for the calendar years, 1965 to 1971.

@Estimated.

Sources :— (i) Railway Board Report—1971-72.

(ii) Review of Public Sector Road Transport Industry—1971-72.

(iii) Indian Air Transport Statistics—1971.

(iv) Monthly Abstract of Statistics, March, 1974 (CSO).

TABLE No. 16(15)

## CONTRIBUTION OF TRANSPORT UNDERTAKINGS TO NATIONAL INCOME

(Rs. in Million at current prices)

Year	Public Sector Transport						Private Sector	
	Rail Trans- port	Road Trans- port	Air Trans- port	Inland Water Trans- port	Sea Trans- port	Total	Trans- port	Total Trans- port Sector
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1960-61	2520	400	180	—	333	3433	1622	5060
1965-66	4000	703	307	—	562	5652	2518	8170
1966-67	4260	853	417	—	700	6240	2780	9020
1967-68	4210	1052	543	8	874	6687	3103	9870
1968-69	4700	1280	592	13	886	7471	3919	11390
1969-70	4970	1500	680	13	1035	8198	4172	12370

## Index Numbers

Base 1960-61 = 100

Year	Public Sector Transport						Private Sector	
	Rail Trans- port	Road Trans- port	Air Trans- port	Inland Water Trans- port	Sea Trans- port	Total	Trans- port	Total Trans- port sector
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1960-61	100	100	100	—	100	100	100	100
1965-66	154	196	171	—	169	165	155	161
1966-67	169	216	232	—	216	182	171	178
1967-68	167	263	302	100	262	195	196	195
1968-69	187	320	329	163	266	210	241	225
1969-70	197	375	376	165	311	239	256	244

**SECTION 17 : INTERNATIONAL COMPARISONS**

TABLE No. 17(1)

INDIA'S PLACE IN THE WORLD TONNAGE\* OF MERCHANT FLEET  
(As on 1-7-1972)

Maritime Country	GRT (In '000)	%Share
1	2	3
1. Liberia	44,444	16.56
2. Japan	31,929	13.02
3. United Kingdom	28,623	10.67
4. Norway	23,507	8.76
5. USSR	16,734	6.24
6. Greece	15,329	5.71
7. United States	15,024	5.60
8. Germany West	8,516	3.17
9. Italy	8,187	3.05
10. Panama	7,794	2.90
11. France	7,420	2.76
12. Sweden	5,632	2.10
13. Netherlands	4,972	1.85
14. Spain	4,300	1.66
15. Denmark	4,020	1.50
16. INDIA	2,656	0.99
17. Canada	2,301	0.87

TABLE No. 17(1)—Contd

	1	2	3
18. Cyprus . . . . .		2,015	0.75
19. Poland . . . . .		2,013	0.75
20. Brazil . . . . .		1,885	0.70
21. Finland . . . . .		1,630	0.61
22. Yugoslavia . . . . .		1,588	0.59
23. China (Taiwan) . . . . .		1,495	0.56
24. Argentina . . . . .		1,401	0.52
25. Germany East . . . . .		1,198	0.45
26. Belgium . . . . .		1,192	0.45
27. Australia . . . . .		1,184	0.44
28. China (people's Republic) . . . . .		1,181	0.44
29. Korea (South) . . . . .		1,057	0.39
30. Portugal . . . . .		1,027	0.38
31. Others . . . . .		15,011	5.60
All Countries . . . . .		268,40	100.00

\*The figures are inclusive of coastal Merchant Shipping Tonnage.

Source ;— Lloyd's Register of Shipping Statistical Tables, 1972.

TABLE No. 17(2)

## ROAD LENGTH BY SURFACES IN DIFFERENT COUNTRIES (1972)

(In Kms.)

Country	Paved	Gravel or crushed stone or stabilised soil surface	Earth roads graded or drained	Un- improved roads	Total
1	2	3	4	5	6
<i>Africa</i>					
Algeria	42,300	—	14,200	19,500	76,000
Morocco*	18,030	—	5,221	28,539	51,790
United Arab Re- public*	9,524	450	10,302	27,000	47,276
Union of South Africa	51,049	75,400	80,200	124,000	330,649
<i>Asia</i>					
Burma*	6,767	7,686	9,347	1,201	25,001
Ceylon*	19,530	18,768	—	3,949	42,247
India**	475,460	—	675,944	—	11,51,404
Indonesia	19,760	36,182	25,436	8,000	89,378
Iran	12,060	22,920	8,462	—	43,442
Iraq*	6,490	—	4,645	6,559	27,091
Japan	107,737	—	836,371	—	10,24,108
Pakistan	17,561	12,540	1,089	—	31,190
Philippines	14,478	39,312	20,060	—	73,850
Saudi Arabia	8,700	—	5,300	—	14,000
Thailand	12,293	5,288	—	8,929	26,503
<i>Europe</i>					
Austria	21,291	6,141	7,170	—	34,602
Belgium	75,150	—	17,000	—	92,150
Denmark	—	—	61,700	2,225	63,925



TABLE No. 17(2)—Contd.

1	2	3	4	5	6
<i>Europe—(Contd.)</i>					
France . . .	651,000	138,000	—	—	789,000
Germany West . .	350,000	35,000	55,000	—	445,000
Italy . . .	270,000	10,000	3,500	—	283,500
Netherlands . . .	—	76,000	—	25,300	101,300
Norway . . .	13,027	60,085	—	—	73,112
Portugal . . .	18,585	793	369	—	19,747
Spain . . .	100,941	30,375	—	—	139,316
Sweden . . .	27,669	69,015	—	—	97,484
Switzerland . . .	60,600	—	—	—	60,600
Great Britain . .	336,638	—	—	—	336,638
<i>America</i>					
Argentina . . .	33,950	65,505	116,561	4,208	220,224
Canada . . .	168,452	467,944	168,569	26,718	831,683
Mexico . . .	58,021	38,999	10,596	17,990	125,606
U.S.A. . .	2,727,710	2,072,939	633,262	615,326	6,049,237
Venezuela . . .	19,170	16,422	8,687	16,037	60,316
<i>Oceania</i>					
Australia . . .	188,715	213,804	—	411,689	814,208
New Zealand* . .	41,818	52,019	—	—	93,837

\*Latest available statistics.

\*\*Revised figures:—Reduction in road lengths is due to identification and exclusion of C.D. and N.E.S. roads transferred to other Govt. Deptt. for maintenance.

Source:—International Road Federation - Highway Expenditures, Road and Motor Vehicle Statistics for 1972.

TABLE No. 17(3) ACTIVE TO NATIONAL INCOME  
SE (1972).ROAD LENGTH RELATIVE TO AREA  
DIFFERENT COUNTRIES (In million US dollars)

Country	Estimated Road length 100 sq. kms. of area		National Income during 1972 *	Percentage of Highway Expendi- ture to national income
	Surfaced	All Roads		
	1	2	3	3
			18,337	2.58
<i>Africa :</i>			...	...
Algeria	1.78	3.19	277.0	...
Morocco	4.05	11.64	113.9	...
U.A.R.	1.00	4.72	28.6	1.72
South Africa	10.36	27.08	550.02	1.62
			143.6	1.74
<i>Asia :</i>				...
Burma	2.13	3.69	52.4	90.7
Ceylon	58.37	64.39	293.9	324.3
India	14.5	35.10*	86.8	210.2
Indonesia	3.75	5.99	46.5	74.2
Iran	3.12	2.64	114.5	142.2
Iraq	1.49	4.78	64.5	206.5
Japan	276.87	276.87	957.5	957.5
Pakistan	...	3.71	...	...
Philippines	17.93	24.62	137.8	189.2
Saudi Arabia	0.41	0.65	...	...
Thailand	3.42	5.16	48.5	75.0
<i>Europe :</i>				
Austria	32.72	41.27	366.3	462.0
Belgium	302.2	302.2	94.9	945.1
Denmark	143.26	148.42	1236.5	1281.1

TABLE No. 17(3)—Contd.

1	2	2	3	4	5
<i>Europe—(Contd.)</i>					
France	651				
Germany West	35	144.23	144.23	1526.1	1526.1
Italy		157.28	794.6	632.4	721.6
Netherlands		92.93	94.12	515.2	521.6
Norway		186.07	248.02	578.8	759.9
Portugal		22.55	22.55	1860.4	1860.4
Spain		21.04	21.44	225.6	229.9
Sweden		27.60	27.60	403.9	403.9
Switzerland		21.68	21.68	1200.0	1200.0
Great Britain		146.77	146.77	943.9	943.9
Kingdom		138.04	138.04	603.8	603.8
<i>America</i>					
<i>Argea :</i>					
Argentina		3.58	7.93	415.8	920.7
Canada		6.38	8.34	2912.6	3806.3
Mexico		4.92	6.37	104.3	238.6
U.S.A.		51.27	64.6	2298.7	2896.6
Venezuela		3.86	6.61	324.5	549.8
<i>Oceania :</i>					
Australia		5.24	11.50	3121.6	
New Zealand		34.93	34.93	3292.5	3292.5

\*Revised figures:—Reduction to the road lengths is due to identification and exclusion of roads transferred to other Govt. Deptt. for maintenance.

Source : (i) U. N. Statistical Year Book 1971 (For Argea)

(ii) International Road Federation—Highway Expenditures Road and Motor Vehicle Statistics for 1972.

(iii) U. N. Monthly Bulletin of Statistics—October 1972. (For Population).

TABLE No. 17(4)

EXPENDITURE ON HIGHWAYS RELATIVE TO NATIONAL INCOME  
COUNTRY-WISE (1972).

(In million US dollars)

Country	Estimated Highway Expenditure in 1972	National Income during 1972 *	Percentage of Highway Expenditure to national income
1	2	3	4
Austria	775.27	10,337	2.58
Australia	826.88	..	..
Belgium	725.08	..	..
Canada	2046.46	..	..
Ceylon	..	..	..
Denmark	339.53	19,760	1.72
France	2822.59	174,631	1.62
Germany West	4002.87	220,638	1.74
India	360.42	..	..
Iran	140.00	..	..
Italy	6203.30	..	..
Japan	6970.13	..	..
Mexico	375.60	..	..
Netherlands	395.41	..	..
Norway	480.99	..	..
Pakistan	..	..	..
Portugal	29.86	..	..
Philippines	97.13	..	..
Saudi Arabia	209.63	..	..
Spain	255.67	..	..
Sweden	621.10	..	..
Switzerland	816.30	..	..
Thailand	97.79	6,800	1.44
United Kingdom	2175.76	..	..
United States	21652.00	1,059,00	02.04

Source : (1) Monthly Bulletin of Statistics, United Nations, October, 1972.

(1) International Road Federation—Highway Expenditures, Road and Motor Vehicle Statistics for 1972.

\*National Income on market prices

TABLE NO. 17(5)

NUMBER OF MOTOR VEHICLES REGISTERED IN DIFFERENT  
FOREIGN COUNTRIES.

(1963—1972)

(In '000)

Country	Year	Auto- mobiles	Trucks and Buses	Total
1	2	3	4	5
Australia . . . . .	1968	3,426	915	4,341
	1969	3,553	930	4,483
	1970	3,891	974	4,865
	1971	3,898	971	4,869
	1972	4,284	1,036	5,320
Canada . . . . .	1968	5,772	1,505	7,277
	1969	5,877	1,550	7,427
	1970	6,160	1,578	7,737
	1971	6,433	1,683	8,116
	1972	6,602	1,734	8,337
West Germany . . . . .	1968	12,000	1,006	13,006
	1969	13,000	1,058	14,058
	1970	14,400	1,208	15,608
	1971	15,300	1,300	16,600
	1972	16,300	1,350	17,650
France . . . . .	1968	10,565	1,840	12,405
	1969	11,210	1,830	13,040
	1970	11,860	1,850	13,710
	1971	12,470	1,900	14,370
	1972	13,130	1,890	15,020

TABLE No. 17 (5)—Contd.

1	2	3	4	5
Japan	1968	4,473	7,188	11,611
	1969	5,514	7,822	13,336
	1970	7,271	8,565	15,836
	1971	9,105	9,084	18,189
	1972	10,915	9,554	20,469
U. S. A.	1968	82,821	17,137	99,958
	1969	86,560	18,142	104,702
	1970	86,861	18,235	105,097
	1971	92,082	19,928	112,010
	1972	96,949	21,669	118,618
U. K.	1968	10,151	1,520	11,671
	1969	10,859	1,612	12,471
	1970	11,292	1,690	12,982
	1971	12,160	1,710	13,870
	1972	12,508	1,751	14,259

Automobiles:—Include private, Government and for hire passenger vehicles having a normal capacity of not more than ten persons and having a minimum of two axles and four wheels.

Trucks:—Include all goods-carrying vehicles having a minimum of two axles and four wheels.

Buses:—Include all passenger-carrying vehicles with a capacity of more than ten persons.

Source: International Road Federation Highway Expenditure Road and Motor Vehicles Statistics.

TABLE NO. 17(G)

# NUMBER OF MOTOR VEHICLES IN USE IN CERTAIN FOREIGN COUNTRIES (As on 31st December, 1971)

(In '000)

Country	Auto- mobiles	Trucks and Buses	Motor cycles, motor bicycles	Total vehicles	Length of all roads (kms)	Popu- lation in million	No. of Vehicles per		
							1000	per	km of
							persons		road
1	2	3	4	5	6	7	8	9	
<i>Europe :</i>									
1. Austria . . .	1,312	389	591	2,295	34,602	7.44	308	66	
2. Belgium . . .	2,130	235	435	2,800	91,960	9.73	288	30	
3. France . . .	12,470	1,900	5,800	20,170	784,739	51.26	393	26	
4. Germany (W) . . .	15,300	1,300	200	16,180	415,000	59.18	284	40	
5. Great Britain . . .	12,160	1,710	1,040	14,910	337,963	55.57	268	44	
6. Italy . . .	9,142	857	3,735	13,734	288,000	54.08	254	49	
7. Norway . . .	747	156	170	1,073	72,261	3.91	274	15	
8. Sweden . . .	2,288	159	41	2,488	97,954	8.11	307	25	
<i>America :</i>									
1. Argentina . . .	1,403	745	420	2,568	200,519	23.55	109	13	
2. Canada . . .	6,433	1,693	130	8,254	812,136	21.79	370	10	

TABLE No. 17 (B)—Contd.

	1	2	3	4	5	6	7	8	9
3. Mexico . . .		1,368	615	164	2,147	71,030	50 83	422	29
4. U.S.A. . .		92,082	13,928	3,293	115,893	69,02,821	207.01	557	19
<i>Asia :</i>									
1. Ceylon . . .		87	43	20	150	42,247	12.67	12	4
2. India <sup>(1)</sup> . . .		602	570	613	1,865	1,207,288	547.90	3	1.4
3. Indonesia . . .		249	127	476	852	84,267	124.89	7	10
4. Japan . . .		9,105	9,084	8,755	26,944	1,015,047	101.66	257	27
5. Pakistan . . .		153	71	126	350	35,163	126.74	3	10
6. Thailand . . .		247	167	418	832	26,635	35.34	24	31
<i>Oceania :</i>									
1. Australia . . .		3,398	972	136	5,006	902,773	12.73	393	6
2. New Zealand . . .		919	186	53	1,156	193,837	2.85	406	12

\* Include private, Government and for hire passenger vehicles having a normal capacity of no more than ten persons and having a minimum of two axles and four wheels.

(1) Figures provisional and as on 31st March, 1971

(2) Include 131,000 misc. vehicles.

Source . 1. Highway Expenditures Road and Motor Veh. statistics

2. U N. Monthly Bulletin of Statistics for 1971. February, 1973



TABLE No. 17(7)

NUMBER OF MOTOR VEHICLES RELATIVE TO ROAD LENGTH  
AREA AND POPULATION (1972)

Country	Number of Motor Vehicles	Number of Motor Vehicles per			
		Kilometre of surfaced road	Kilometre of road (All surfaces)	100 Sq. kilometre of area	Lakh of population
1	2	3	4	5	6
<b>Africa :</b>					
United Arab Republic	157,373	25.8	3.3	15.7	451.7
<b>Asia :</b>					
India*	2,032,369	4.3	1.8	62.0	978.9
Burma	71,160	4.9	2.8	10.5	258.9
Indonesia	993,181	16.1	10.1	160.6	730.2
Japan	25,944,000	26.3	26.3	7,284.5	25,190.7
Pakistan				37.0	
Philippines	583,582	11.0	8.0	126.5	1,510.5
<b>Europe :</b>					
France	20,920,000	26.5	26.5	3,024.3	40,464.5
West Germany	17,850,000	45.0	40.1	7,199.0	28,949.1
Switzerland	2,331,281	39.5	38.5	5,695.4	36,312.4
United Kingdom	13,392,000	45.7	45.7	6,308.0	27,571.2
<b>America :</b>					
Canada	8,493,953	13.3	10.2	85.4	3,857.4
U.S.A.	122,421,419	25.5	20.2	1,307.5	55,100.5
<b>Oceania :</b>					
Australia	5,515,000	13.7	6.2	71.7	42,554.0
New Zealand	1,157,963	12.3	12.3	430.8	33,928.8

Source : (i) U.N. Statistical Yearbook-1971 (For Area).

(ii) International Road Federation-Highway Expenditures, Road  
and Motor Vehicle Statistics for 1972.(iii) U.N. Monthly Bulletin of Statistics-October 1972 (For Popu-  
lation).

TABLE No. 17(8)

NUMBER OF MOTOR COACHES AND BUSES BY SEATING CAPACITY  
IN EUROPEAN COUNTRIES AND UNITED STATES OF AMERICA

Category @	Year	Motor Coaches and Buses Number			Seating capacity ('000)
		Upto 32 seats	Over 32 seats	Total	
1	2	3	4	5	6
Austria . . . (31 Dec.)	1969	1,607	5,00	6,614	217
	1970	1,542	5,262	6,804	256
	1971	1,518	5,388.	6,906	268
Denmark . . . (31 Dec.)	1969	1,235	3,478	4,713	196
	1970	1,348	3,691	5,039	210
	1971	1,402	3,858	5,260	221
Finland . . . (31 Dec.)	1969	1,771	6,064	7,835	285
	1970	1,717	6,354	8,071	301
	1971	1,731.	6,471	8,202	310
France . . . (31 Dec.)	1969	25,040 (a)	37,733 (b)	62, 1	1,869
	1970	29,365 (a)	37,827 (b)	67,192	1,947
	1971	32,648	40,840	73,488	2,099
West Germany . . . (1 July)	1969	..	..	..	...
	1970	0,639	38,376	47,015	2,009
	1971	0,027	11,002	49,829	2,143
Ireland . . . (30 Sep.)	1969	81	1,865	1,946	...
	1970	120	1,892	2,012	...
	1971	162	1,917	2,079	...

TABLE No. 17.(B)—Contd.

1	2	3	4	5	6
Italy (31 Dec.)	1969	...	...	(c)	...
	1970	13,211	25,645	38,856	...
	1971	14,780	25,820	43,610	1,624
				(c)	...
Luxembourg (31 Dec.)	1969	...	...	...	...
	1970	157	430	587	...
	1971	159	436	595	21
Netherlands (1 Aug.)	1969	...	...	...	...
	1970	...	...	10,500	...
	1971	...	...	10,500	...
Norway (31 Dec.)	1969	1,326	5,978	7,304	263
		(a)	(b)		
	1970	1,430	6,055	7,463	272
		(a)	(b)		
	1971	1,441	6,265	7,706	305
		(a)	(b)		
Poland (31 Dec.)	1969	5,617	25,843	31,490	1,149
	1970	5,853	27,327	33,176	1,274
	1971	5,851	30,922	36,773	1,423
Sweden (31 Dec.)	1969	5,470	7,206	12,676	...
		(c)	(d)		
	1970	...	...	13,455	...
	1971	...	...	13,518	...
Switzerland (30 Sep.)	1969	3,389	1,532	4,921	147
	1970	3,829	1,713	5,442	147
	1971	8,945	1,805	5,750	135

TABLE No 17(b)—*Contd*

1	2	3	4	5	6
Great Britain (3rd Quarter)	1969	7,200 (b)	71,900 (c)	72,100	3,778
	1970	7,259 (c)	7,058 (c)	79,267	3,809
	1971	7,735 (c)	70,394 (c)	78,129	3,771
Northern Ireland (3rd Quarter)	1969	..	..	..	..
	1970	42 (c)	1,592 (c)	1,634	81
	1971	52 (c)	1,510 (c)	1,592	77
Yugoslavia (31 Dec)	1967	5,932	7,281	13,263	111
	1970	8,706	8,163	14,868	461
	1971	7,393	9,006	16,404	509
U.S.A. (31 Dec)	1969	..	..	..	..
	1970	..	370,021	..	..
	1971	..	..	..	..

(a) The date in the year to which the figures apply is shown in brackets under the name of the country concerned.

(a) Upto 29 seats.

(b) Over 29 seats.

(c) Excluding motor coaches

(d) Upto 30 seats.

(e) Including vehicles exempted from licensing duty.

TABLE NO. 17(9)

Number of Goods Vehicles on Road in European countries and United States of America

Country & Year (a)	No. of Goods Road Vehicles (b)		Total (c)	Number of goods Trailers & Semi-Trailers	Total load capacity of goods road vehicles
	Operated for hire or reward	Operated on own account			
	1	2	3	4	5
Austria (31 Dec.)					
1967	.	16,134	07,885	104,019	74,910
1968	.	15,506	90,521	106,107	74,310
1969	.	15,454	97,403	112,057	76,407
1970	.	16,423	104,625	121,040	70,411(d)
1971	.	16,064	111,204	128,068	80,061
prus (31 Dec.)					
1967	.	...	...	12,795(e)	...
1968	.	...	...	...	...
1969	.	...	...	...	...
1970	.	...	...	6,090(c)	...
1971	.	...	...	0,783(e)	...

Table No. 17(5)—Contd.

1	2	3	4	5	6
<b>Denmark (31 Dec.)</b>					
1967	...	...	249,405	...	403
1968	...	...	233,558	...	505
1969	...	...	235,641	...	530
1970	...	...	246,416	...	548
1971	...	...	214,476	...	543
<b>Finland (31 Dec.)</b>					
1967	...	...	92,922	...	...
1968	23,477	69,145	92,622	11,002	345
1969	23,981	73,126	97,107	13,635	368
1970	22,026	78,913	100,859	12,844	382
1971	22,026	83,546	111,372	18,032	412
<b>France (31 Dec.)</b>					
1967	174,508(f)	2,186,130(f)	2,360,646(f)	350,477	5,624
1968	169,664	2,261,900	2,431,564	387,382	6,401
1969	189,797	2,393,196	2,587,993	472,923	6,982
1970	183,340	2,321,700	2,605,040	288,078	6,940
1971	198,064	2,569,223	2,767,267	308,168	7,365

TABLE No. 17(9)—Contd.

1	2	3	4	5	6
W. Germany (1 July)					
1967	174,754	840,279	1,015,033	255,085(m)	4,438
1968	...	...	...	...	...
1969	...	...	...	...	...
1970	167,050	861,066	1,028,116	250,954(m)	5,183
1971	178,145	899,856	1,078,001	260,835(m)	5,604
Italy (31 Dec)					
1967	175,456	882,316	1,057,782	61,983	2,722
1968	...	...	...	...	...
1969	...	...	...	...	...
1970	...	...	1,219,030	59,810	...
1971	...	...	1,284,970	62,345	...
Luxembourg (31 Dec)					
1967	...	...	11,278	...	...
1968	...	...	...	...	...
1969	...	...	...	...	...
1970	...	...	8,528	...	...
1971	...	...	8,671	5,885	46

Table No. 17 (9) - *Contd.*

	1	2	3	4	5	6
<b>Netherlands (1 Aug.)</b>						
1967		...	...	265,000	36,000	1,000
1968		...	...	...	39,652	1,125
1969		43,243	139,757	195,000	...	1,200
1970		...	...	310,000	...	1,300
1971		...	...	325,000	...	1,350
<b>Norway (31 Dec.)</b>						
1967		...	...	132,926	21,261	...
1968		...	...	132,047	35,922	354
1969		11,020	123,703	137,723	44,750	395
1970		11,756	128,535	143,311	37,562	...
1971		14,159	140,946	155,105	44,907	...
<b>Poland (31 Dec.)</b>						
1967		02,230	129,111	212,669	225,050	1,433
1968		89,498	140,794	230,202	253,303	1,593
1969		85,284	162,999	248,203	284,872	1,792
1970		91,639	181,365	263,004	110,490	1,335
1971		91,619	105,389	277,008	139,197	1,455



TABLE No. 17(9)—Contd.

1	2	3	4	5	6
<b>Spain (31 Dec.)</b>					
1967	...	.	520,787	13,575	...
1968	.	..	592,351	14,528	...
1969	.	..	654,088	15,815	...
1970	.	...	710,223	17,666	..
1971	.	...	768,373	19,574	...
<b>Sweden (31 Dec.)</b>					
1967	.	32,483	105,246	...	...
1968	.	35,051	103,711	65,301	..
1969	.	34,310	104,073	74,453	765
1970	.	33,916	106,475	84,529	968
1971	.	34,408(g)	104,092	88,087	938
<b>Switzerland (30 Sept.)</b>					
1967	.	...	199,771(h)	45,216	454
1968	.	.	98,944	...	419
1969	.	...	105,498	...	446
1970	.	...	111,110	51,590	478
1971	.	...	115,240	54,720	500

TABLE No. 17(2) -Contd.

	1	2	3	4	5	6
<b>Great Britain</b>						
<b>(3rd Quarter)</b>						
1967		243,000	1,496,000	1,739,000	...	...
1968		...	...	1,456,642	...	...
1969		211,000	1,353,000	1,564,000	...	5,484
1970		...	...	1,616,000(i)(j)	...	...
1971		...	...	1,618,000(i)(j)	...	...
<b>Yugoslavia (30 Sept.)</b>						
1967		10,118	99,014	109,912	31,709	646
1968		10,619	79,936	90,555	...	...
1969		11,632	83,686	95,318	...	763
1970		12,666	94,621	107,287	40,717	858
1971		13,669	108,436	122,105	43,714	962
<b>U.S.A. (31 Dec.)</b>						
1967		...	...	...	...	...
1968		...	...	...	...	...
1969		...	...	...	...	...
1970		...	...	18,48,421	15,492,430	...
1971		...	...	...	...	...

- (a) The date in the year to which the figures apply is shown in brackets under the name of the country concerned.
- (b) Including tractors used for haulage of goods vehicles on public roads.
- (c) Including tractors.
- (d) Exclude vehicles of unstated capacity.
- (e) Excluding vehicles whose licence was not issued.
- (f) Including special vehicles, such as fire engines and ambulances.
- (g) In addition, there were 2652 tractors of semi-trailers, operated for hire or reward.
- (h) Including 102119 vehicles used for both goods and passengers (station wagons).
- (i) Excluding vehicles exempt from licensing duty.
- (j) In order to estimate the distribution of vehicles by load capacity, vehicles census figures by unladen weight were related to a sample of gross weight and payload, given by vehicle manufacturers.

TABLE No. 17 (10)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>France :</i>								
1953	101,4373	172,103	128,397(c)	124,883(d)	60,120(e)	101,584(f)	59,927	24,91,391
1958	21,49,777	...	126,414(c)	127,808(d)	63,772(e)	110,224(f)	68,605	26,56,598
1970	17,81,578	170,048	140,556(c)	126,737(d)	63,342(e)	114,059(f)	73,000	26,78,640
1971	19,21,153	339,146	117,489(c)	13,02,232(d)	67,774(e)	12,01,91(f)	81,901	28,49,108
<i>W. Germany :</i>								
1950	10,1335	211,531	125,778	90,387	79,326	16,625	92,155	10,19,337
1962	86,141	...	131,144	62,001	84,953	20,953	100,252	1066,144
1970	443,113	234,098	141,119	68,347	92,238	28,401	112,490	1,40,666
1971	456,183	244,170	151,552	67,020	101,051	37,717	125,508	12,03,509
<i>Italy :</i>								
1950	...	...	...	...	...	...	...	...
1969	...	...	...	...	...	...	...	...
1970	...	...	...	...	...	...	13,127	12,32,177
1971	...	...	...	...	...	...	14,910	12,97,88
<i>Norway :</i>								
1950	31,794	10,538	21,622	13,357	1,538	748	986	133,033
1969	93,335	...	19,900	15,629	1,277	1,195	1,195	138,918
1970	92,690	11,523	10,189	17,172	3,613	2,127	1,424	144,735
1971	91,226	12,392	16,936	19,341	4,637	2,373	1,610	154,224

TABLE No. 17 (10) *Contd.*

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Spain</i>								
1960	213,914	127,961	51,917	52,790	39,637	31,045	1,766	597,117
1969	462,080	...	53,919	53,506	41,974	41,801	5,430	659,518
1970	341,371(g)	165,981(h)	55,290	53,367	44,313	19,901	6,295	716,510
1971	357,775	183,023(h)	56,015	52,580	45,413	55,559	7,033	767,406
<i>Switzerland</i>								
1968	53,356	13,204	9,010	8,919	14,382	73	2,234	101,178
1969	71,834	...	8,798	9,227	15,572	67	2,504	108,002
1970	60,247	15,190	8,869	9,505	17,220	63	2,721	113,831
1971	62,670	15,700	9,910	9,690	18,205	65	2,795	110,035
<i>Great Britain*</i>								
1960	973,631	69,942	92,317	171,268	105,450	152,011	6,370	1,434,212
1969	10,58,000	...	70,000	133,000	104,000	171,000	5,580	1,569,580
1970	914,000	...	260,000	88,000	129,000	145,000	5,409	1,619,409
1971	938,000	...	259,000	95,000	128,000	150,000	5,465	16,23,465
(a) Up to 1,000 kg. (b) Capacity of 1,001—3,000 kg. (c) Capacity of 3,000—4599 kg. (d) Capacity of 4600—6599 kg. *Excluding vehicles exempted from licensing duty. Source: Annual Bulletin of Transport Statistics for Europe, 1971.								
					(e) Capacity of 6600—8999 kg.	(f) Capacity of 9000 kg. and over	(g) Capacity of upto 999 kg.	(h) Capacity of 1000—2999 kg.

TABLE No. 17(11)

# VOLUME OF DOMESTIC INTERCITY PASSENGERS TRAFFIC BY TYPE OF TRANSPORT (1950-70)

(In billion of passenger miles except percent)

Year	Total Traffic Volume	Private automobiles		Airways*	
		Volume	% of total	Volume	% of total
(1)	(2)	(3)	(4)	(5)	(6)
1950 . . . .	508	436	86.20	10	1.98
1955 . . . .	716	637	89.01	23	3.18
1957 . . . .	748	670	89.61	28	3.76
1958 . . . .	760	685	90.14	29	3.75
1959 . . . .	765	687	89.89	33	4.26
1960 . . . .	784	706	90.10	34	4.33
1961 . . . .	791	714	90.18	35	4.37
1962 . . . .	818	736	89.95	37	4.58
1963 . . . .	853	766	89.83	43	5.02
1964 . . . .	896	802	89.53	49	5.49
1965 . . . .	920	818	88.86	58	6.31
1966 . . . .	971	856	88.19	69	7.14
1967 . . . .	1021	890	87.18	87	8.55
1968 . . . .	1079	936	86.80	101	9.38
1969 . . . .	1138	977	85.86	120	10.54
1970 (Prel) .	1185	1026	86.60	119	10.01

\* Includes domestic commercial revenue service and private pleasure and business flying.

† Includes electric railways.

@ Includes Great Lakes.

Source: Statistical Abstract of the United States—1972 page—586.

TABLE No. 17(11)—Contd.

Year	Buses(excludes school buses)		Rail roads		Inland Waterways <sup>(a)</sup>	
	Volume	% of total	Volume	% of total	Volume	% of total
1	7	8	9	10	11	12
1950	26	5.20	32	6.39	1.2	0.23
1955	25	3.56	29	4.01	1.7	0.24
1957	21	2.87	26	3.51	1.9	0.26
1958	21	2.73	24	3.11	2.1	0.27
1959	20	2.66	22	2.93	2.0	0.26
1960	19	2.47	22	2.75	2.7	0.34
1961	20	2.56	21	2.59	2.3	0.30
1962	22	2.66	20	2.47	2.7	0.33
1963	23	2.64	19	2.19	2.8	0.32
1964	23	2.61	18	2.05	2.8	0.32
1965	24	2.58	18	1.91	3.1	0.34
1966	25	2.53	17	1.78	3.4	0.35
1967	25	2.44	15	1.50	3.4	0.33
1968	25	2.27	13	1.23	3.4	0.32
1969	25	2.19	12	1.08	4.0	0.33
1970 (Prel)	25	2.14	11	0.92	4.0	0.34

TABLE No. 17(12)

VOLUME OF DOMESTIC INTERCITY FREIGHT TRAFFIC BY TYPE  
OF TRANSPORT  
(1940 to 1970)

(In billion of ton-miles)

Year	Total Traffic Volume	Rail/Road		Motor-vehicles	
		Vol.	%	Vol.	%
1	2	3	4	5	6
1940 . . .	651	412	63.24	62	9.53
1945 . . .	1672	736	60.64	67	6.24
1950 . . .	1094	628	57.44	173	15.80
1955 . . .	1296	655	50.43	223	17.20
1957 . . .	1354	645	47.62	254	18.77
1958 . . .	1231	575	46.68	256	20.76
1959 . . .	1303	599	46.01	279	21.41
1960 . . .	1330	595	44.73	285	21.46
1961 . . .	1326	586	44.17	296	22.36
1962 . . .	1387	616	44.38	309	22.50
1963 . . .	1469	644	43.82	336	22.89
1964 . . .	1556	679	43.65	356	22.90
1965 . . .	1651	721	43.67	359	21.76
1966 . . .	1759	762	43.33	381	21.66
1967 . . .	1776	742	41.79	389	21.88
1968 . . .	1839	757	41.16	396	21.55
1969 . . .	1895	774	40.84	404	21.32
1970 (Prel)	1921	768	39.97	412	21.44

(1) Includes electric railways, express and mail.



TABLE No.17(12)—*Contd.*

Year	IWT <sup>1</sup>		Oil Pipe lines		Airways <sup>2</sup>	
	Vol.	%	Vol.	%	Vol.	%
1	7	8	9	10	11	12
1940	118	18.13	59	9.10	Z	0.002
1945	143	13.31	127	11.80	0.1	0.008
1950	163	14.93	129	11.81	0.3	0.029
1955	217	16.68	203	15.66	0.5	0.037
1957	232	17.12	223	16.45	0.6	0.042
1958	189	15.35	211	17.16	0.6	0.047
1959	197	15.09	227	17.43	0.7	0.057
1960	220	16.56	229	17.19	0.8	0.058
1961	210	15.82	233	17.59	0.9	0.068
1962	223	16.08	238	17.14	1.3	0.093
1963	234	15.94	253	17.26	1.3	0.088
1964	250	16.08	269	17.27	1.5	0.096
1965	262	15.89	306	18.56	1.9	0.116
1966	281	15.95	333	18.93	2.3	0.128
1967	281	15.85	361	20.33	2.6	0.145
1968	291	15.85	391	21.28	2.9	0.157
1969	303	15.98	411	21.69	3.2	0.168
1970 (Prel)	307	15.98	431	21.43	3.4	0.176

(1) Less than 50 million ton-miles.

(2) Includes Great Lake.

(3) Domestic revenue service only.

Source :—Statistical Abstract by the United States, 1972.

TABLE No. 17(13)  
**GOODS TRANSPORT BY ROAD IN CERTAIN EUROPEAN COUNTRIES**

(In millions)

Country	Tons carried		Ton kilometres	
	1970	1971	1970	1971
(1)	(2)	(3)	(4)	(5)
Austria (a) (b)	9.3	9.0	3314	3573
Czechoslovakia (c)	703	775	10093	11074
East Germany	464	196	12233	12993
West Germany (d)	165	174	41900	44500
Finland (e)	370	390	13400	14200
France	1564	...	66,900	...
Hungary	407	433	5820	6639
Netherlands	338	346	12400	13100
Norway	181	..	3479	..
Poland (f) (g)	370	980	8670	18082

Note.—Figures are estimates of varying degree of accuracy.

(a) Austrian Vehicles only.

(b) Long and medium distance transport only.

(c) Transport performed by enterprises falling under the jurisdiction of the Ministry of Transport on own account of socialized enterprises

(d) Long distance transport only. This refers to operations by vehicles authorised to carry goods to or from points more than 50 kms from the place where the vehicle is normally stationed.

(e) Exclude traffic on private roads

(f) For 1970: Traffic and transport performed by Polish vehicles only.

For 1971: Including performance by foreign vehicles.

TABLE, No. 17(13)—Contd.

	(1)	(2)	(3)	(4)	(5)
Spain	. . . .	...	...	51700	54900
Sweden	. . . .	480	...	17800	...
Turkey	. . . .	51	...	16459	...
USSR	. . . .	14623	15919	220834	241000
United Kingdom (h)	. . . .	1722	1737	83067	85029
Yugoslavia	. . . .	698	834	21342	24130
USA (i)	. . . .	..	...	601500	616100

(g) Including transport on own account other than that of the Ministries and socialized enterprises.

(h) Great Britain.

(i) Inter-city transport.

TABLE No. 17 (14)

TOTAL NUMBER OF ACCIDENTS INVOLVING INJURIES TO  
PERSONS AND CASUALTIES

Country	Year	Total No of accidents involving injuries to Persons	No injured and killed in road accidents/casualties		
			Injured	Killed	Total
(1)	(2)	(3)	(4)	(5)	(6)
Australia	1968	58,759	82,210	3,382	85,592
	1969	62,597	87,864	3,508	91,367
	1970	65,210	91,554	3,798	95,352
	1971	48,873(a)	63,056(a)	3,590(a)	71,746
Austria	1968	48,963	68,492	2,157	70,649
	1969	50,189	70,206	2,071	72,277
	1970	51,631	72,653	2,238	74,891
	1971	52,641	74,741	2,468	77,209
Canada	1968	1,15,486	1,73,901	5,318	1,79,219
	1969	1,28,434	1,80,829	5,424	1,86,254
	1970	1,19,936	1,78,501	5,080	1,83,581
	1971	...	...	...	...
Sri Lanka (Ceylon)	1968	14,549	7,739	598	8,337
	1969	17,038	8,903	621	9,524
	1970	17,448	9,325	661	9,986
	1971	16,254	8,416	688	9,104

(a) Upto the end of September.

TABLE No 17 (14)—*Contd.*

	(1)	(2)	(3)	(4)	(5)	(6)
Czechoslovakia ..	1968	36,300	45,751	2,353	48,104	
	1969	38,028	48,235	2,501	50,739	
	1970	33,163	41,469	2,199	43,668	
	1971	33,999	42,501	2,240	44,741	
France ..	1968	2,20,201	3,12,313	14,274(b)	3,26,587	
	1969	2,20,618	3,11,273	14,664(b)	3,25,937	
	1970	2,28,600	3,22,200	13,050(b)	3,37,250	
	1971	2,42,200	3,45,800	16,200(b)	3,62,000	
Germany West ..	1968	3,39,704	4,68,718	16,636	4,85,354	
	1969	3,38,921	4,72,387	16,646	4,89,033	
	1970	3,76,520	5,30,231	19,123	5,49,354	
	1971	3,68,664	5,17,198	18,685	5,35,883	
Great Britain ..	1968	2,64,200	3,42,398	6,810	3,49,208	
	1969	2,61,778	3,43,811	7,383	3,53,194	
	1970	2,67,457	3,55,847	7,501	3,63,353	
	1971	2,59,025	3,44,390	7,696	3,52,086	
Italy ..	1968	1,78,173	2,34,039	9,809(c)	2,43,848	
	1969	1,75,780	2,30,809	9,891(c)	2,40,700	
	1970	1,73,132	2,28,236	10,208(c)	2,38,444	
	1971	1,83,257	2,44,408	10,103(c)	2,54,511	
Japan	1968	6,35,056	8,28,071	14,246(d)	8,42,317	
	1969	7,20,880	9,67,000	16,257(d)	9,38,257	
	1970	7,18,080	9,81,096	16,765(d)	9,97,861	
	1971	7,00,290	9,49,689	16,278	9,65,967	

(b) Deaths occurring within five days of the accidents

(c) Deaths occurring within seven days of the accidents

(d) Deaths occurring within twenty four hours of the accidents

TABLE No. 17 (14)—Contd.

(1)	(2)	(3)	(4)	(5)	(6)
Poland	1968	22,209	29,442	9,424(e)	32,866
	1969	24,037	31,917	3,418(e)	35,335
	1970	26,414	34,398	3,446(e)	37,844
	1971	28,939	38,380	3,799(e)	42,179
U.S.A.	1968	13,46,800	20,00,000	55,200(f)	20,55,200
	1969	13,47,600	20,00,000	56,400(f)	20,56,400
	1970	13,46,800	20,00,000	54,800(f)	...
	1971	...	...	...	...

(e) Deaths occurring within forty eight hours of the accidents.

(f) Deaths occurring within one year of the accidents.

Source : World Road Statistics, 1967-1971.

TABLE No. 17 (15)  
**WORLD TANKER FLEET AT THE END OF 1971** (Excluding 20.3 million D.W.T.  
 Combined carriers) (2,000 D.W. tonnes and over) By Flag and Ownership

Flag	OWNERSHIP					Change Share		
	Oil	Pvt.	Govt.	Other	Total	Total 1970	1971 over 1970	of Total 1971
	Co.				1971			
	Million		Tonnes		Deadweight			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Liberia	8.3	35.2	...	0.2	43.7	38.4	+5.3	25
Norway	0.2	19.2	...	...	19.4	17.5	+1.9	11
U.K.	17.9	7.4	0.2	0.1	25.6	22.3	+3.3	14
Japan	3.1	15.9	.	...	19.0	15.8	+3.2	11
U.S.A.	4.1	4.1	1.7	..	9.9	9.7	+0.2	5
Panama	3.4	2.4	...	..	5.8	5.7	+0.1	3
France.	4.8	2.8	0.1	..	7.7	5.9	+1.8	4
Greece.	—	8.6		..	8.6	7.9	+0.7	5
Other Western Europe	10.6	13.4	0.1	..	24.1	21.7	+2.4	14
Other Western Hemisphere	2.7	0.3	0.3	..	3.3	3.4	-0.1	2
USSR, E. Europe & China	—	—	6.3	..	6.3	6.2	+0.1	4
Other Eastern Hemisphere	1.0	3.3	0.1	.	4.4	3.7	+0.7	2
<b>TOTAL</b>	<b>56.1</b>	<b>112.6</b>	<b>8.8</b>	<b>0.3</b>	<b>177.8</b>	<b>158.2</b>	<b>+19.6</b>	<b>100</b>
Fleet as at end of 1970	50.0		99.2	8.8	0.2	158.2		
Net increase 1971	6.1		13.4	—	0.1	19.6		

Source: —British Petroleum Statistical Review of the World Oil Industry—1971.

TABLE No. 17 (16)

**WORLD ESTIMATED CRUDE OIL PRODUCTION (a)**  
(Million Tonnes)

Country	1970	1971	1972
1	2	3	4
<i>North America (b) of which</i>	<i>60.37</i>	<i>605.4</i>	<i>619.5</i>
U.S.A.	533.7	530.4	532.0
Canada	70.0	75.0	87.5
<i>Latin America and American Area of which</i>	<i>267.7</i>	<i>261.1</i>	<i>245.8</i>
Venezuela	193.2	181.9	167.4
Mexico	21.9	21.9	22.5
Argentina	20.0	21.5	22.2
<i>Middle East of which :</i>	<i>712.6</i>	<i>629.1</i>	<i>912.4</i>
Iran	191.8	227.3	234.0
S. Arabia	175.6	223.5	265.5
Kuwait	137.4	146.0	152.0
Iraq	76.5	84.0	67.0
Abu Dhabi	33.5	44.0	50.0
Neutral Zone	26.4	29.1	30.3
Qatar	16.4	20.2	25.5
Egypt	16.9	14.7	11.0
<i>Africa (Excl. Egypt) of which</i>	<i>274.9</i>	<i>237.5</i>	<i>264.4</i>
Libya	155.6	132.2	105.0
Nigeria	53.3	75.3	69.5
Algeria	47.3	36.5	52.0



TABLE No. 17 (16)—Contd.

	1	2	3	4
Western Europe of which . . . . .		19 0	18 3	19.1
West Germany . . . . .		7 5	7 4	7.1
Yugoslavia . . . . .		2 9	3.0	3 1
Austria . . . . .		2 8	2.5	2.5
France . . . . .		2 3	1.9	1 5
Far east of which . . . . .		67 1	78.1	92.5
Indonesia . . . . .		42.1	44.5	54.0
Australia . . . . .		8.3	14.4	15.2
Brunei . . . . .		6.9	6.5	9.2
India . . . . .		6 8	7.2	7 5
Malaysia . . . . .		0 9	3 3	4 4
Burma . . . . .		0 8	0.8	0 9
USSR, Eastern Europe & China of which . . . . .		390.2	420.8	442.3
USSR . . . . .		352.7	377.0	394.0
China (c) . . . . .		20.0	25.5	29.6
Rumania . . . . .		13.4	13.8	14.0
World Total . . . . .		2335.2	2472.3	2599.0

(a) Excluding small scale production in Cuba, Thailand, Newzealand, Mongolia and Afganistan.

(b) Including natural gas liquids in Canada, also synthetic oils.

(c) Including oil from shale and coal.

Source : Indian Petroleum and Chemicals Statistics, 1972.

TABLE No. 17. (17)  
PRODUCTION OF CEMENT IN DIFFERENT COUNTRIES (1966-72).  
(In lakh tonnes)

Country	1966	1967	1968	1969	1970	1971	1972
1	2	3	4	5	6	7	8
Australia	37.44	37.20	38.64	43.08*	45.96	47.16	52.80
Belgium**	57.96	58.20	57.36	62.64	67.32	69.36	70.92
Canada	83.64	73.56	72.24*	72.84*	72.72	83.16	90.96
Czechoslovakia	61.32	64.56	64.92	67.32	74.04	79.56	80.40
France	234.36	247.68	255.72	276.96	290.04	289.44	302.88
East Germany	64.44	71.76	75.48	74.04	79.92*	84.72	88.56
West Germany	347.40	317.16	334.44	350.76	383.28*	410.16	431.52
India	110.58*	113.02	119.43*	136.24*	139.56*	149.32	157.44
Italy	224.28	262.80	295.44	313.44*	331.20	317.28	334.56
Japan	375.60	424.92	476.76	513.84	571.92	594.60	663.36
Mexico	49.08	54.84	61.20*	69.00*	73.80*	77.28	85.80
Pakistan	18.48	20.40	25.68	26.76	26.28	26.52	28.08
Poland	100.44	111.36	115.92	118.32	121.80	130.80	129.92
Romania	58.80	63.36	70.20	75.12	81.24	85.20	88.56
Spain**	120.72	134.76	151.92*	163.20	165.36	169.92	194.40

TABLE No. 17 (17)—Contd.

1	2	3	4	5	6	7	8
Sweden . . .	37.56	39.00	39.72*	39.60	39.96	38.28	37.32
U. S. S. R. . .	800 16	848 04	875.04	897.36	952.44	1002.96	1043.04
U. A. R. . . .	26 40	27.60	31.14	36.12	39.96	...	...
U. K. . . . .	167 38	176.04	178.68*	74.24	170.52	Neg.	180.48
U. S. A. ** . .	671.40	644.52	637.96*	695.76*	677.52	682 56	703.32
Yugoslavia . .	32 88	33 12	37.68*	39.60	44.04	49.50	57.48

\* Revised.

\*\* Excluding natural cement (U S A 1971 data-shippments)

Note —The annual production of cement indicated above have been built up from figures of monthly average production published in respect of different countries

Source —(1) U N Monthly Bulletin of Statistics—July 1972.

(2) Statistical Bulletin of Cement Production and despatches for the year 1971—  
Ministry of Industrial Development, Office of the Cement Controller, New Delhi.

TABLE No. 17(18)

RELATIVE IMPORTANCE OF THE PRINCIPAL MODES OF INLAND  
FREIGHT TRANSPORT (a) IN EUROPE

(Percentages)

Country	Year	Goods Carried					Ton-Kilometres				
		Rail (b)	Road	IWT	Oil Pipe Lines	Rail (b)	Road	IWT	Oil Pipe Lines	Road	IWT
1	2	3	4	5	6	7	8	9	10		
Austria	1963	...	...	...	...	...	...	...	...	...	...
	1970	59.5	10.6	8.7	21.2	57.1	18.7	7.3	16.9		
	1971	58.8	9.8	6.2	33.2	49.7	17.8	5.9	26.6		
Bulgaria	1963	16.4	81.6	2.0*(c)	—	60.8	25.2	6.0*(c)	—		
	1970	11.9	86.1	2.0*(c)	—	59.9	34.1	6.0*(c)	—		
	1971	11.3	86.7	2.0*(c)	—	59.4	34.6	6.0*(c)	—		
Czechoslovakia	1963	28.8	70.1	0.6(c)	0.7	82.5	18.9	3.4(c)	3.2		
	1970	24.7	73.4	0.4(c)	1.4	74.8	13.5	3.2(c)	8.5		
	1971	24.0	74.2	0.4(c)	1.4	74.1	14.1	2.9(c)	8.9		
West Germany (Fed ral Republic)	1963	51.0	18.6	26.0	4.4	46.6	21.0	28.8	3.0		
	1970	42.5	19.2	20.0	10.3	40.3	23.3	27.1	9.2		
	1971	38.1	21.0	27.7	10.9	38.1	23.6	25.9	10.4		
Finland	1963	...	...	...	...	...	...	...	...		
	1970	6.1	93.9	—	—	31.9	68.1	—	—		
	1971	5.3	94.7	—	—	28.8	71.2	—	—		

TABLE No. 17(18)---Contd.

1	2	3	4	5	6	7	8	9	10
France . . .	1963	18.9	72.9	5.7	2.5	55.7	31.3	9.6	3.4
	1970	12.9	77.7	5.5	3.9	59.8(r)	36.9(r)	7.8(r)	13.5(r)
	1971	..	..	..	..	..	..	..	..
East Germany (Democratic Republic)	1963	42.1	56.0	1.9	..	82.1	13.5	4.1	..
	1970	33.9	62.2	1.9	2.0	71.3	21.0	4.0	3.7
	1971	33.2	62.7	1.8	2.3	70.9	21.2	3.8	4.1
Hungary . . .	1963	..	..	..	..	..	..	..	..
	1970	21.8	76.5	0.6	1.1	71.0	20.9	5.7	2.4
	1971	21.0	77.1(r)	0.5(r)	1.4(r)	69.5	22.7	4.8	3.0
Netherlands . .	1963	7.8	53.5	36.7	2.0	12.6	23.0	60.8	3.6
	1970	4.9	53.7	38.2	3.8	7.0	24.4	60.6	8.0
	1971	3.6	53.6	37.9	4.9	6.3	25.5	59.2	9.0
Norway . . .	1963	12.1	97.9	..	..	..	..	..	..
	1970	11.2	85.8	..	..	..	..	..	..
	1971	..	..	..	..	..	..	..	..
Poland . . .	1963	6.6	33.8	0.6	..	94.9	3.9	1.2	..
	1970	49.2	47.7	1.2	1.9	84.7	7.1	2.0	5.9
	1971	28.3	69.8	0.7	1.2	79.0	13.7	1.6	5.7
U.S.S.R. . . .	1963	17.9	78.5	2.0	1.6	84.3	5.8	5.5	4.4
	1970	15.9	80.2	2.0	1.9	78.6	7.0	5.5	8.9
	1971	15.5	80.8	1.9	1.8	77.8	7.1	5.1	9.7

TABLE No. 17(18)—Contd.

1	2	3	4	5	6	7	8	9	10
U. K. (d).	1963	15.1	83.4	0.6	0.9	30.2	68.4	0.3	1.1
	1970	10.3	88.1	0.4	1.2	22.2	75.2	0.1	2.4
	1971	9.8	88.5	0.3	1.4	20.0	77.1	0.1	2.8
Yugoslavia	1963	27.7	68.1	4.2	—	69.1	16.9	14.0	—
	1970	9.4	87.8	2.8	—	41.6(r)	46.1(r)	12.3(r)	—
	1971	8.1	89.4	2.5	—	39.9	49.0	11.1	—

(a) Because of differences in the methods of compilation of the basic statistics of the various modes of inland transport and of the fact that the original statistics of road transport are in many cases, particularly when transport on own account is involved, based on estimate made in the country concerned, the figures in this table must be regarded merely as orders of magnitude. Moreover in respect of some countries, the share of road transport in total tonnage carried may be slightly over stated because of double entry where the same consignments are carried successively by different operators. Finally, ton. km. have been given the same value for all modes of transport.

In certain countries, coastal shipping plays an important part in the inland transport of the country. Such countries include Denmark, Italy, Norway and the United Kingdom.

(b) Main-line system of each country only.

(c) Transport by National Shipping Undertakings at home and abroad.

(d) Great Britain.

\* Estimate by the Secretariat.

(r) Revised.

... Not available.

— Magnitude zero

Source :—Annual Bulletin of Transport Statistics for Europe—197

TABLE No 17(19)  
WORLD MOTOR VEHICLE REGISTRATIONS  
(1950-1970)

(In Millions)

Name of the region	1950	1955	1960	1965	1968	1969	1970
1	2	3	4	5	6	7	8
United States	49.2	62.7	73.9	90.4	100.9	105.4	108.4
Other North and Central America	3.2	4.9	6.8	8.2	10.2	10.8	11.3
South America	1.3	1.8	3.0	5.1	6.6	7.1	8.1
Europe	12.5	19.6	33.8	56.5	72.2	77.3	86.8
Africa	1.2	1.8	2.5	3.4	4.0	4.3	4.5
Asia	1.2	2.2	3.6	9.7	17.2	20.6	24.8
Oceania	1.0	2.0	3.5	4.7	5.4	5.8	5.0
TOTAL	70.4	95.9	126.9	178.0	216.6	231.5	248.9

Source : Statistical Abstract of the United States, 1972.

TABLE No. 17(20)

# ESTIMATED COST OF OPERATING AN AUTOMOBILE-1970 (Jan.)

(Cents per mile cost)

Item	10 year aver- age	1st year (14,500 miles)	3rd year (11,500 miles)	5th year (9,900 miles)	7th year (8,500 miles)	10th year (5,700 miles)
1	2	3	4	5	6	7
Total . . . . .	11.89	14.21	12.10	11.50	12.02	10.82
Costs excluding taxes . . . . .	10.54	11.93	10.33	10.32	10.88	9.56
Depreciation . . . . .	3.19	6.59	3.92	2.60	1.63	0.83
Repairs and maintenance (1) . . . . .	1.52	0.50	1.59	1.74	3.40	0.53
Replacement tyres & tubes (2) . . . . .	0.39	0.12	0.12	0.39	0.44	0.62
Accessories (3) . . . . .	0.03	0.01	0.01	0.01	0.05	0.05
Gasoline (4) . . . . .	1.73	1.73	1.73	1.73	1.73	1.73
Oil (4) . . . . .	0.16	0.11	0.13	0.16	0.19	0.22
Insurance (5) . . . . .	1.72	1.44	1.73	1.97	1.57	2.61
Garaging, parking tools etc. (6) . . . . .	1.80	1.43	1.65	1.82	1.88	2.71
Taxes and fees (7) . . . . .	1.35	2.28	1.22	1.18	1.14	1.26

(1) includes lubrication, washing and waxing; replacement of spark plugs, points and condenser wiper blades, fan belt, radiator hoses etc., starter, water pump and brake over haul, universal joint replacement etc. and major repair such as a complete 'valve job'.



- (2) Covers 7 new regular tyres and 4 new snow tyres during life of car.
- (3) Includes a set of vinyl floor mats and seat covers.
- (4) Gasoline use set at 13.8 miles per gallon; oil use associated with gasoline at rate of 1 quart of oil to 128 gallon of gas.
- (5) Includes \$ 50,000 combined public liability property damage \$1000 medical and comprehensive for full 10 years; uninsured motorist coverage and \$100 deductible collision insurance assumed for first 5 years.
- (6) Includes monthly charges of \$10 for garage rental or cost of owners garaging facility, parking fee average of \$ 54 per year and toll average of \$ 6.50 per year.
- (7) Includes Federal gasoline tax of 4 cents and Maryland gasoline tax of 7 cents per gallon; Maryland registration fee of \$20 and titling tax at 4% of retail price; and Federal excise taxes on motor vehicle: tyre and oil. Total taxes include property and oil taxes.

Source :—Statistical Abstract of the United States of America, 1972.

TABLE No. 17(21)  
**MOTOR VEHICLE ACCIDENTS, NUMBER AND DEATHS**  
**BY TYPE OF ACCIDENT**  
**(1950-1971)**

Item	1950	1955	1960	1965
1	2	3	4	5
Motor vehicle accidents 1000 .	8300	9900	10400	13200
Accidents per 10,000 vehicles .	1688	1577	1397	1439
Traffic deaths* . . . .	34763	38426	38137	49163
Non-collision accidents .	10600	12100	11900	14900
Collision accidents:				
with other motor vehicles .	11650	14500	14800	20800
with pedestrians . . .	9000	8200	7850	8900
with fixed objects . . .	3490	3605	3610	4560
Traffic death rates:				
per 100,000 population . .	23.0	23.4	21.2	25.4
per 10,000 motor vehicles .	7.1	6.1	5.1	5.4
per 100 million vehicle miles .	7.6	6.3	5.3	5.5

\*Totals may not quite equal sums of various types because the estimates are generally made only to nearest 10 deaths, and to nearest 50 deaths for certain types.

TABLE No. 17(21)—(Contd.)

Item	1967	1968	1969	1970	1971
1	6	7	8	9	10
Motor Vehical accidents:1000	13700	14600	15500	16000	16300
Accidents per 10,000 vehicles	1385	1416	1443	1435	1417
Traffic deaths*	52924	55200	56400	54800	54700
Non-collusion accidents	16700	17800	16000	14200	13200
Collusion accidents					
with other motor vehicles	22000	22500	24000	23300	23300
with pedestrains	9400	9800	9800	10400	10600
with fixed objects	4020	5100	6600	6900	7100
<i>Traffic death rates :</i>					
per 100,000 population	26.7	27.6	27.9	26.9	26.7
per 10,000 motor vehicles	5.4	5.4	5.3	4.9	4.8
per 100 million vehicle miles	5.5	5.4	5.3	4.9	4.7

TABLE No. 17 (22)

## PRODUCTION OF MOTOR VEHICLES IN CERTAIN FOREIGN COUNTRIES

Country	Year	Private Cars	Buses & Coaches	Goods Vehicles	Motor Cycles & Scooters		Mopeds
					5	6	7
Australia	1969	3,71,108(a)	(d)	53,488	.	.	...
	1970	3,91,946(a)	(d)	55,320	..	..	...
	1971	..	..	..	..	..	...
Austria	1969	1,140	168	1,104	4,284(b)	1,39,200	1,39,200
	1970	1,176	180	5,382	7,044(b)	1,61,748	1,61,748
	1971	588	204	6,024	7,680(b)	1,74,732	1,74,732
Canada	1969	10,35,551	3,17,348	(c)	..	..	..
	1970	9,40,389	2,53,685	(c)	..	..	..
	1971	..	..	..	..	..	..
Ceylon	1969	152	—	81	322	39	39
	1970	522	—	78	879	—	—
	1971	117	—	110	669	—	—
Czechoslovakia	1969	1,32,409	2,527	23,646	1,33,337	60,554	60,554
	1970	1,42,856	2,602	24,462	1,07,754	81,290	81,290
	1971	1,49,016	2,779	25,067	1,09,688	84,083	84,083

TABLE No. 17 (22) — *Contd.*

	1	2	3	4	5	6	7
France							
		1969	21,68,462	3,124	2,87,486	3,375	11,41,399
		1970	24,58,038	3,108	2,88,940	4,292	11,02,498
		1971	26,93,989	3,554	3,12,751	6,508	11,85,323
West Germany*							
		1969	33,12,539(c)	12,713	2,68,412(f)	54,296	1,29,499
		1970	35,27,864(c)	14,692	2,85,280(f)	70,123	1,42,598
		1971	36,96,779(c)	12,245	2,59,483(f)	66,462	1,79,027
Great Britain							
		1969	17,17,100(g)	23,300	4,42,400(h)	78,400(i)	4,900
		1970	16,40,966(g)	23,234	4,34,298(h)	82,568(i)	...
		1971	17,41,940(g)	26,518	4,29,688(h)	...	...
Italy							
		1969	14,77,366	2,838	1,15,747	1,96,300(a)	5,80,000
		1970	17,19,715	3,034	1,31,503	2,19,220(a)	5,60,000
		1971	17,01,064	3,792	1,09,479	2,05,260(a)	6,05,000
Japan							
		1969	26,11,499	41,842	20,38,673(i)	25,76,873	(j)
		1970	31,78,708	46,565	20,77,944(i)	29,47,617	(i)
		1971	37,17,858	34,596	20,70,249(i)	34,00,502	(j)
Poland							
		1969	50,200	5,100	46,800(c)	11,500	85,500
		1970	67,900	5,200	46,200(c)	95,100	85,200
		1971	86,200	9,900	49,600(c)	79,100	97,500

TABLE No. 17(22)—*Contd.*

	2	3	4	5	6	7
USA	1969	82,24,392	(d)	19,81,519	...	...
	1970	65,50,128	(d)	20,18,859	...	...
	1971	85,83,653	(d)	20,88,001	...	...

\*Including Berlin (West)

(a) Includes Station Wagons.

(b) Motor Cycles only.

(c) Included in Buses and Coaches.

(d) Included in Goods Vehicles.

(e) Includes Estate Cars.

(f) Includes special vehicles except road tractors.

(g) Includes taxis and estate cars.

(h) Includes motive units for articulated vehicles and road tractors.

(i) Includes three-wheeled vehicles.

(j) Included in motor cycles and scooters.

Source:—World Road Statistics 1970-71.

## FIRST REGISTRATION OF MOTOR VEHICLES IN CERTAIN FOREIGN COUNTRIES

Country	Year	Private Cars	Buses & Coaches	Goods Vehicles	Motor Cycles & Scooters		Mopeds
					5	6	
1	2	3	4	5	6	7	
Australia . . .	1969	4,00,879	2,041	85,239	25,386	(a)	(a)
	1970	4,13,061	(i)	88,537	32,701	(a)	(a)
	1971	4,17,223	(i)	87,287	48,786	(a)	(a)
Austria . . .	1969	1,00,652(b)	413	10,925	1,019	32,021	32,021
	1970	1,27,392(b)	426	11,748	1,156	32,516	32,516
	1971	1,93,192(b)	463	15,214	1,490	37,079	37,079
Canada . . .	1969	...	...	...	...	...	...
	1970	...	...	...	...	...	...
	1971	...	...	...	...	...	...
Ceylon . . .	1969	2,381	575	2,396	1,117	-	-
	1970	1,780	833	2,416	1,421	-	-
	1971	1,128	722	798	1,036	-	-
Czechoslovakia . . .	1969	.	..	...	...	..	..
	1970	...	..	...	...	..	..
	1971	.	.	.	..	..	..

TABLE No. 17(23) — *Contd.*

	1	2	3	4	5	6	7
France	.	.	1969 13,65,710 1970 12,96,628 1971 14,66,868	5,092 5,858 ...	2,17,380 2,01,886 2,26,779(k)	21,685 28,426 46,764	(e) (c) (c)
Germany (West)	.	.	1969 18,41,048(b) 1970 21,07,123(b) 1971 21,51,557(b)	5,217 5,219 5,371	1,35,151(c) 1,53,013(c) 1,49,507(c)	5,447(l) 8,892(f) 16,231(f)	... ... ...
Great Britain	.	.	1969 9,89,400(g) 1970 10,99,852(g) 1971 —	5,134 5,018 6,213	2,39,600 2,36,039 2,34,700	52,353(d) 60,319(d) 77,610(d)	44,646(h) 58,010(h) 63,511(h)
Italy	.	.	1969 12,17,929 1970 13,68,594 1971 14,34,529	2,738 3,095 2,911	88,355 81,559 76,196	96,089(a) 94,503(v) 102,936(v)	2,13,615 2,13,463 2,18,721
Japan	.	.	1969 20,36,662 1970 23,79,129 1971 24,04,511	26,707 27,827 21,824	17,81,723(a) 16,99,931(a) 15,99,011(a)	... ... r..	... ... ...
Poland	.	.	1969 58,547 1970 62,263 1971 80,182	5,417 5,491 6,204	33,108 34,506 34,108	1,19,357 1,26,309 1,06,538	... ... ...



TABLE No. 17(23) - Contd.

	1	2	3	4	5	6	7
USA		1969	91,46,524	(j)	16,68,812		
		1970	83,88,204	(j)	17,90,177		
		1971	97,29,109	(j)	19,81,284		

\*Including West Berlin.

(a) Included in Col. 6.

(b) Includes estate cars.

(c) Mopeds are not required to be registered.

Number estimated at 800000 in 1970.

(d) Includes three wheeled Vehicles.

(e) Includes special vehicles.

(f) Only those needing a road licence.

(g) Includes estate cars and taxis.

(h) Includes motor vehicles and scooters up to

(i) Not required to be registered.

(j) Included in Col. 5.

(k) Including buses & coaches.

Source:—World Road Statistics 196

TABLE No. 17(24)

## MOTOR FUEL CONSUMED IN CERTAIN FOREIGN COUNTRIES

Country	Year	Petrol consum- ption in metric tonnes (000)	Percen- tage of Col.(3) used in road vehicles	Diesel consum- ption in metric tons (000)	Percen- tage of Col.(5) used in road vehicles
1	2	3	4	5	6
Australia . . . .	1969	6,830	100	2,696	100
	1970	7,293	100	2,949	100
	1971	7,607	100	3,157	100
Austria . . . .	1969	1435.8	...	984.0	...
	1970	1582.7	...	1,135.7	...
	1971	1797.9	...	1,048.3	...
Canada . . . .	1969	2,0748	100	(a)	...
	1970	21,600	100	(a)	...
	1971	...	...	(a)	...
Sri Lanka (Ceylon) . . .	1969	147.6	...	227.8	...
	1970	144.3	...	222.9	...
	1971	135.4	...	254.8	...
Denmark . . . .	1969	1,481	92	5,216	10
	1970	1,499	95	5,710	10
	1971	1,540	95	5,798	10
France . . . .	1969	11,349	96.8	4,273	94.0
	1970	12,281	97.0	4,703	94.9
	1971	13,323	97.8	5,133	95.7

TABLE No. 17(24)—Contd.

1	2	3	4	5	6
Germany West	1969	14,084 (b)	98.5	8,744	66
	1970	15,492 (b)	98.5	9,640	66
	1971	15,205 (b)	98.5	9,711	66
Great Britain	1969	13,443	97.5	4,868	100
	1970	14,234	97.5	5,034	100
	1971	14,963	97.5	5,186	100
Italy	1969	8,550	98	8,265	49
	1970	9,200	98	11,470	38
	1971	9,800	98	13,060	31
Japan	1969	13,913	98.1	9,127	92.2
	1970	15,798	97.5	10,311	92.1
	1971	17,223	97.3	12,869	91.1
Indonesia	1969	1,4576	100	720.6	100
	1970	1,5631	100	886.0	100
	1971	...	...	...	...
U.S.A.	1969	2,47,849	95.3	1,20,599 (c)	15.9
	1970	2,55,499	96.5	1 27,860 (c)	...
	1971				

(a) Included under petrol.

(b) Including West Berlin.

(c) Total domestic demand of distillate fuel oil.

Source.—World Road Statistics 1967-1971.

TABLE No 17(25)

## EXAMPLE OF AVERAGE ANNUAL TAXATION OF THREE COMMON CATEGORIES OF VEHICLES IN CERTAIN FOREIGN COUNTRIES 1971

Country	Private car of 1000cc travelling 15,000kms. and Consuming 12000 litres of petrol per annum	Private cars 1500cc travelling 15000kms. and consuming 15000 litres of petrol per annum	Public carrier's goods vehicles of 16 ton laden weight operating at 75% capacity travelling 50,000kms per annum and consuming 40 litres of diesel fuel/ 100 kms
1	2	3	4
Austria	177	232	2,310
Belgium . . . .	286	371	1,629
Cyprus . . . . .	192	228	(a)
Finland . . . . .	221	296	1,928(b)
France . . . . .	222	308	.
Germany West . . . .	180	237	.
Great Britain . . . .	273	335(c)	3,006(c)
Italy . . . . .	295	403	2,312
Japan . . . . .	220	270	460
Netherlands . . . .	197	250	805
Norway . . . . .	480	650	..
Switzerland . . . .	219	291	3,316

(a) Vehicles of three types not allowed.

(b) Petrol driven vehicles.

(c) Excludes purchase tax, lubricating oil tax and a few minor imports.  
Source :—World Road Statistics, 1967-1971.

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ANNEXURES I—X

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## ANNEXURE 1

### FORMULA INDICATING ROAD MILEAGES IN EACH PROVINCE AND STATE TO GIVE A TOTAL OF 400,000 MILES BEING THE ESTIMATED REQUIREMENT FOR THE WHOLE OF INDIA FOR THE NEXT TWENTY YEARS

It is desirable that the road requirements of all Provinces and States should be calculated as far as possible on the same basis, making due allowance for geographical, agricultural and population conditions.

2. The object of road planning as considered by the Nappur Conference of State Chief Engineers held in 1943 under the Chairmanship of Shri J. Vesugar is to give India a well balanced road system suitable for the needs of the country for the next 20 years and so that practically all villages are brought reasonably close to a planned system of all-weather roads. As the net work of railways and roads will obviously be closer near large towns and in densely populated agricultural areas than in undeveloped and sparsely populated regions, any formula evolved to indicate communication requirements should take these needs into account. Possible agricultural or industrial development during the next twenty years should also be taken into account.

3. The formula for the communication system required in each area should therefore contain several factors, giving the requirements (A) for agricultural areas, (B) for non-agricultural areas, (C) for large villages, towns and markets, and (D) for proposed agricultural and industrial development for the next twenty years. To obtain the requirement for roads, the length of railway communication, (E) already in the area should be deducted. (It is assumed there will be no great extension of the railway system after the war). With regard to Air transport, it was decided that just as the introduction of the motor car and motor lorry had not made obsolete the bullock cart which had increased in numbers and was still increasing and as the making of railways had stimulated rather than decreased the making of roads, so air transport would not take the place of road and rail transport during the next twenty years but would cater for its own traffic just as cart, railway and motor vehicle transport cater for their own traffic. The formula should therefore be in the form:—

$$\text{Road mileage requirements} = A + B + C + D - E$$

4. The formula is set out below in more detail.

## THE NATIONAL AND PROVINCIAL HIGHWAYS AND MAJOR DISTRICT ROADS

$$\left. \begin{array}{l} \text{Mileage of National and} \\ \text{Provincial Highways and} \\ \text{Major District Roads.} \end{array} \right\} = \frac{A}{5} + \frac{B}{20} + N + 5T + D - R$$

Where A = Agricultural area of the Province or State concerned.

B = Non-agricultural area.

N = Number of towns and villages having a population of 2,001—5,000.

T = Number of towns and villages having a population over 5,000.

D = Allowance for agricultural and industrial development during the next 20 years.

R = Railway mileage in the area under consideration.

NOTE.—1. Provinces and States should add allowance for future development; about 1/5 percent has been allowed in all for possible future agricultural and industrial development during the next 20 years but as such development will be more in some areas and less in others, the basis on which the figures added in this column have been calculated, should be stated.

2. The ratio 0.2 A in the formula represents a grid or net work of roads in the Agricultural area with 10 mile sides and 0.05 B represents a grid with 40 mile sides. This means that in the highly developed agricultural area no village will be more than 5 miles from a main road and the average distance will be less than two miles in most cases. Similarly in the non-agricultural area no village will be more than 20 miles from a main road and the average distance will be 6 or 7 miles.

3. In addition to this net work towns and villages with a population over 2,000 have been allowed additional roads in various ratios: this appears reasonable as the network of roads gets closer towards large population and market centres.

$$\left. \begin{array}{l} \text{Mileage of other} \\ \text{District and Village} \\ \text{Roads.} \end{array} \right\} = \frac{V}{3} + \frac{Q}{2} + R + 2S + D$$

V = Number of villages with population of 300 or less

Q = Number of villages with population of 501—1,000

R = Number of villages with population of 1,001—2,000

S = Number of villages with population of 2,001—5,000

D = Allowance for agricultural and industrial development during the next 20 years.

Note — 1. Small villages with a population of 500 or less were allowed an average of only one-fifth of a mile each because in Provinces where the density of villages is high, a greater number would be picked up by main and subsidiary roads. Larger factors have been taken for the bigger villages

2 Provinces and States were requested to add allowance for future development and to show the basis on which the figures have been calculated.

3. The total mileage allowed for provinces is 210,000 that, for States being 40,000.

4. For the existing mileage of earth roads some provinces included in their official reports the mileages maintained by the P.W.D. and Local Bodies, while the others included estimated mileages of all village roads and trails whether maintained or not. The figures on earth roads are therefore not comparable as between Provinces



**ANNEXURE II**  
**THE NATIONAL HIGHWAYS ACT, 1956**

*An Act to provide for the declaration of certain highways to be national highways and for matters connected therewith.*

Be it enacted by Parliament in the Seventh year of the Republic of India as follows:—

**1. Short title, extent and commencement.**—(1) This Act may be called the National Highways Act, 1956.

(2) It extends to the whole of India.

(3) It shall come into force on such date as the Central Government may by notification in the Official Gazette, appoint.

**2. Declaration of certain highways to be national highways.**—(1) Each of the highways specified in the Schedule except such parts thereof as are situated within any municipal area is hereby declared to be national highway.

(2) The Central Government may, by notification in the Official Gazette, declare any other highway to be a national highway and on the publication of such notification such highway shall be deemed to be specified in the Schedule.

(3) The Central Government may, by like notification, omit any highway from the Schedule and on the publication of such notification, the highway so omitted shall cease to be a national highway.

**3. Definition.**—In this Act, “municipal area” means any municipal area with a population of twenty thousand or more, the control or management of which is entrusted to a municipal committee, a town area committee, a town committee or any other authority.

**4. National highways to vest in the Union.**—All national highways shall vest in the Union, and for the purposes of this Act “highways” include—

(i) all lands appurtenant thereto, whether demarcated or not;

- (ii) all bridges, culverts, tunnels, causeways, carriageways and other structures constructed on or across such highways; and
- (iii) all fences, trees, posts and boundary, furlong and milestones of such highways or any land appurtenant to such highways.

**5. Responsibility for development and maintenance of national highways.**—It shall be the responsibility of the Central Government to develop and maintain in proper repair all national highways, but the Central Government may, by notification in the Official Gazette, direct that any function in relation to the development or maintenance of any national highway shall, subject to such conditions, if any, as may be specified in the notification, also be exercisable by the Government of the State within which the national highway is situated or by any officer or authority subordinate to the Central Government or to the State Government.

**6. Power to issue directions.**—The Central Government may give directions to the Government of any State as to the carrying out in the State of any of the provisions of this Act or of any rule, notification or order made thereunder.

**7. Fees for services or benefits rendered on national highways.**—(1) The Central Government may, by notification in the Official Gazette levy fees at such rates as may be laid down by rules made in this behalf for services or benefits rendered in relation to the use of ferries, temporary bridges and tunnels, on national highways

(2) Such fees when so levied shall be collected in accordance with rules made under this Act.

(3) Any fee leviable immediately before the commencement of this Act for services or benefits rendered in relation to the use of ferries, temporary bridges and tunnels on any highway specified in the Schedule shall continue to be leviable under this Act unless and until it is altered in exercise of the power conferred by sub-section (1).

**8. Agreements with State Governments or municipalities.**—Notwithstanding anything contained in this Act, the Central Government may enter into an agreement with the Government or any State or with any authority entrusted with the control of management of any municipal area in relation to the development or maintenance of the whole or any part of a national highway situated within the State or, as the case may be, in relation to the development or maintenance of any such part of a highway situated within a municipal area as referred to in sub-section (1) of section 2 and any such agreement may provide for the sharing of expenditure by the respective parties here to.

**9. Power to make rules.**—(i) The Central Government may, by notification in the Official Gazette, make rules for carrying out the purposes of this Act.

(2) In particular and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

- (a) the manner in which, and the conditions subject to which any function in relation to the development or maintenance of a national highway or any part thereof may be exercised by the State Government or any official or authority subordinate to the Central Government or the State Government;
- (b) the rates at which fees for services rendered in relation to the use of ferries, temporary bridges and tunnels on any national highway may be levied and the manner in which such fees shall be collected;
- (c) the periodical inspection of national highways and the submission of inspection reports to the Central Government;
- (d) the reports on works carried out on national highways; and
- (e) any other matter for which provision should be made under this Act.

10. **Laying of notifications, rules, etc. before Parliament.**—All notifications or agreements issued or entered into under this Act shall be laid before both Houses of Parliament as soon as may be after they are issued or entered into, and all rules made under section 9 shall be laid for not less than thirty days before both Houses of Parliament as soon as may be after they are made, and shall be subject to such modifications as Parliament may make during the session in which they are so laid or the session immediately following.

## NATIONAL HIGHWAYS IN INDIA

(as on March 1972)

S. No.	N.H. No.	Description
(1)	(2)	(3)
1	1	The Highway connecting Delhi, Ambala, Jullundur, and Amritsar and proceeding to the border between India and Pakistan.
2	1A	The Highway connecting Jullundur, Madhopur, Jammu, Baidihai, Srinagar, Baramulla and Uri.
3	2	The Highway connecting Delhi, Mathura, Agra, Kanpur, Allahabad, Banaras, Mohania, Barhi and Calcutta.
4	3	The Highway connecting Agra, Gwalior, Shivpuri, Indore, Dhulia, Nasik, Thana and Bombay.

(1)

(2)

(3)

- 5 4 The Highway starting from its junction near Thana with the highway specified in serial No. 4 and connecting Poona, Belgaum, Hubli, Bangalore, Ranipet and Madras.
- 6 4A The Highway connecting Belgaum, Anmod, Fonda and Panaji.
- 7 5 The Highway starting from its junction near Baharagora with the highway specified in Serial No. 3 and connecting Cuttack, Bhubaneswar, Visakhapatnam, Vijayawada and Madras.
- 8 5A The Highway starting from its junction near Haridaspur with N. H. No. 5 and terminating at the Paradip Port.
- 9 6 The Highway starting from its junction near Dhulia with the highway specified in serial No. 3 and connecting Nagpur, Raipur, Sambalpur, Baharagora and Calcutta.
- 10 7 The Highway starting from its junction near Banaras with the highway specified in Serial No. 3 and connecting Mangawan, Rewa, Jabalpur, Lakhnadon, Nagpur, Hyderabad, Kurnool, Bangalore, Krishnagiri, Salem, Dindigul, Madurai and Cape-Comorin.
- 11 7A The Highway connecting Palayam, Kottary, on N. H. 7 with the Tuticorin Port.
- 12 8 The Highway connecting Delhi, Jaipur, Ajmer, Udaipur, Ahmedabad, Baroda and Bombay.
- 13 8A The Highway connecting Ahmedabad, Limbdi, Morvi and Kandla.
- 14 8B The Highway starting from its junction near Bamanbhor with the highway specified in Serial No. 10 and connecting Rajkot and Porbandar.
- 15 9 The Highway connecting Poona, Sholapur, Hyderabad and Vijayawada.
- 16 10 The Highway connecting Delhi and Fazilka and proceeding to the border between India and Pakistan.
- 17 11 The Highway connecting Agra, Baratpur, Jaipur and Bikaner.
- 18 12 The Highway connecting Jabalpur, Bhopal and Birsar.
- 19 13 The Highway connecting Sholapur in Maharashtra to Chitaldurg in Mysore.

(1) (2)

(3)

- 20 15 The Highway connecting Pathankot, Amritsar, Bhatinda, Gangraagar, Bikaner, Jaisalmer, Barmer to its junction with the N. H. No. 8A near Samakhiali (near Kandla).
- 21 17 The Highway connecting Panvel on N. H. No. 4 Mahad, Paoaji, Karwar, Mangalore, Cannanore, Calicut (Kozikode) and Trichur.
- 22 17A The Highway starting from its junction near Cortalim with N. H. No. 1 and terminating at the Mormugao Port.
- 23 21 The Highway starting from its junction near Chandigarh with the N. H. No. 22 and connecting Rupar, Bilaspur, Mandi, Kulu and Manali.
- 24 22 The Highway connecting Ambala, Kalka, Simla, Narkanda, Rampur and Chini and proceeding to the border between India and Tibet near Shipki-La.
- 25 23 The Highway connecting Chas, Rauchi, Rourkela, Talcher and terminating at N. H. 42.
- 26 24 The Highway connecting Delhi, Bareilly and Lucknow.
- 27 25 The Highway connecting Lucknow, Kanpur, Jhansi and Shivpuri.
- 28 26 The Highway connecting Jhansi and Lucknow.
- 29 27 The Highway connecting Allahabad with the highway specified in serial No. 8 near Mangawan.
- 30 28 The Highway starting from its junction near Barauni with the highways specified in Serial No. 26 and connecting Mirzapur, Pipra, Gorakhpur and Lucknow.
- 31 28A The Highway starting from its junction near Pipra with the highway specified in Serial No. 22 and connecting Sagar and Raxaul and proceeding to the border between India and Nepal.
- 32 29 The Highway connecting Gorakhpur, Ghazipur and Banar.
- 33 30 The Highway starting from its junction near Mohania with the highway specified in Serial No. 3 and connecting Patna and Bakhtiarpur.

(1)	(2)	(3)
31	31	The Highway starting from its junction near Barhi with the highway specified in Serial No. 3 and connecting Bakhtiyarpur Mokameh, Purnea, Dalkhola, Siliguri, Sivok and Cooh-Behar and proceeding to its junction with the highway specified in serial No. 33 near Goalpara.
35	31A	The Highway connecting Sivok and Gandak.
36	31B	The Highway connecting North Salmara to river Brahmaputra.
37	32	The Highway connecting Jamshe dpur, Purulin, Dhanbad and Gobindpur.
38	33	The Highway starting from its junction near Barhi with the highway specified in serial No. 3 and connecting Ranchi and Tatanagar and proceeding to its junction with the highway specified in Serial No. 7 near Baharagora
39	34	The Highway starting from its junction near Dalkhola with the highway specified in Serial No. 26 and connecting Behrampore, Barasat and Calcutta.
40	35	The Highway connecting Barasat and Bangaon and proceeding to the border between India and Pakistan.
41	36	The Highway connecting Nowgong, Dabaka and Dimapur (Manipur Road).
42	37	The Highway starting from its junction near Goalpara with the highway specified in Serial No. 26 and connecting Gauhati, Jorahat, Kamargaon, Makum and Sairkhoa Ghat.
43	38	The Highway connecting Makum, Ledo and Lakhapani.
44	39	The Highway connecting Kamargaon, Imphal and Pale and proceeding to the border between India and Burma.
45	40	The Highway connecting Jorahat and Shillong and proceeding to the border between India and Pakistan near Duli.
46	41	The Highway between the junction near Kolaghat with the National Highway No. 6, and the point where it touches Haldia Port.

(1)	(2)	(3)
47	42	The Highway starting from its junction near Sambalpur with the highway specified in Serial No. 7 and proceeding via Angul to its junction with the highway specified in Serial No. 6 near Cuttak.
48	43	The Highway connecting Raipur and Vizianagaram and proceeding to its junction with the Highway specified in Serial No. 6 near Vizianagaram.
49	44	The Highway connecting Shillong, Passi, Badarpur and Agartala.
50	45	The Highway connecting Madras, Tinchirapalli and Dindigul.
51	46	The Highway connecting Krishnagiri and Ranipet.
52	47	The Highway connecting Salem, Coimbatore, Trichur, Ernakulam, Trivandrum and Cape Comorin.
53	47A	The Highway starting from its junction near Trichur with the highway specified in Serial No. 41 and connecting with the West Coast Road near Chajineri.
54	48	The Highway connecting Bangalore, Hassan and Mangalore.
55	49	The Highway connecting Madhurai and Dhanushkodi.
56	50	The Highway connecting Nasik with the Highway specified in Serial No. 5 near Poona.

### ANNEXURE.III

## REPORT OF CHIEF ENGINEERS ON ROAD DEVELOPMENT FOR INDIA (1961-81)

### Summary of Recommendations

1. Formulated in 1943, the 'Nagpur Plan' aimed at increasing the then existing length of surfaced roads from 88,000 to 1,23,000 and of unsurfaced roads from 1,38,000 to 2,08,000 miles for serving the needs of the country during the following 20 years. These mileage targets have been generally achieved and by 1961, i.e., the end of the Second Five-Year Plan period, the lengths of the surfaced and unsurfaced roads are expected to be 1,44,000 and 2,35,000 miles respectively. The road system will, however, still remain deficient in respect of road surfaces and bridges.

Vast political, economic and social changes have taken place since the formulation of the Nagpur Plan. The achievement of the mileage target laid down in the Nagpur Plan will, therefore, not be adequate for our future requirements, and a fresh appraisal of the situation needs to be made to cater for the transport requirements of our expanding economy.

The matter was discussed at the Chief Engineers' meeting held at Shillong in May 1957 as a result of which a Road Development Plan (1961-81) to meet the needs of the country for a period of twenty years from the commencement of the Third Five-Year Plan was framed. The broad principles governing the Road Development Plan and the salient features are indicated briefly in the succeeding paragraphs.

2. Of late, there has been a tendency on the part of the people to gravitate towards urban areas. Lack of amenities in our villages is one of the major causes of this trend. Provision of a good road communication system can check this trend considerably.

The future road pattern of the country should give due attention not only to urban areas but also to rural areas. In rural areas it will not be possible to serve every small village individually. It would be desirable to adopt a system of grouping villages, a minimum aggregate population of about 5,000 being taken as a workable unit.



Attention also needs to be given to the intensity and pattern of traffic. The number of motor vehicles in India has grown from 1,21,282 in 1943 to 4,18,05 in 1955 and is bound to increase tremendously in subsequent years. The demand for annual production of automobiles is estimated to increase from 76,000 in 1960-61 to about 3,70,000 in 1980-81.

3. The future road system in the country should, besides serving the highly developed and agricultural areas, also taken into account the needs of the semi-developed and underdeveloped areas, administrative headquarters, places of pilgrimage and tourist interest, health resort, universities and cultural institutions, important industrial and commercial centres, big railway junctions and ports. Strategic needs of the country should also receive due consideration.

4. The classification of roads would broadly be the same as laid down in the Nagpur plan viz., National Highways, State Highways, Major District Roads, Other District roads and Village Roads. The Plan takes into consideration only such village roads as satisfy certain minimum standard. Further, to cater for an uninterrupted flow of heavy and fast moving through traffic, some lengths of National and State Highways in highly industrialised and thickly populated areas should be designed as "Expressways".

5. India is far behind in the road mileage when compared with other advanced countries of the world. Even with the achievement of the targets of road mileage laid down in the Nagpur Plan the road length in India will be 26 miles per 100 square miles of area. It is therefore, imperative to increase the road mileage considerably, in order to meet the requirements of the growing economy of the country.

Keeping in view the limitation of funds it is proposed to increase by the end of 1980-81 the total road length from 1,31,000 to 6,57,000 miles, out of which about 40 percent of the mileage will be surfaced. This will give a spread over of 52 miles per 100 sq. miles of area. The objective is to bring every village.

(i) in a developed and agricultural area within 4 miles of a metalled road and 1.5 miles of any road;

(ii) in a semi-developed area within 8 miles of a metalled road and 3 miles of any road; and

(iii) in an undeveloped and uncultivable area within 12 miles of a metalled road and 5 miles of any road.

The implementation of the Plan would involve an expenditure of about Rs. 5,200 crores as indicated below:

(1)	Mileage		Cost in Rs. crores (improvement and new construction)
	As expected on 1-4-1961	Targets proposed in the Plan	
(1)	(2)	(3)	(4)
National Highways	13,800	32,000	980
State Highways	35,000	70,000	1,580
Major District Roads	95,200	9,000	1,360
Other District Roads	78,300	1,80,000	650
Village Roads (Classified)	1,56,700	2,25,000	630
<b>TOTAL</b>	<b>3,79,000</b>	<b>6,57,000</b>	<b>5,200</b>

6. Highway standards and specifications depend upon a number of factors such as traffic requirements, safety considerations, climatic and topographical features etc. These specifications to be adopted should, however, be such as would easily permit "State" construction so that (since funds are limited) the lowest specifications for meeting the immediate needs can be adopted to start with and further improvements carried out subsequently in stages according to the development of traffic.

It would be desirable to have uniformity of standards in certain fundamental aspects such as gradients, curves, sight distance, land width, etc. for similar classes of roads throughout the country. In general IRC standard should be adopted.

7. Comparatively speaking, the expenditure on road development in India is very low. In order however, to step up the pace of development of roads in the country, it is necessary to have a sustained and increasing tempo of expenditure in year to come. This plan envisages to increase the expenditure on road development from Rs. 80 crores during 1961-62 to Rs. 440 crores during 1980-81.

8. Road development and maintenance in India is at present being financed mainly from the general revenues to which most of the taxes on road transport levied by the Centre and the States are credited. The proceeds from these taxes in 1956-57 amounted to about Rs. 79 crores which practically covered the entire expenditure on development and maintenance of roads in that year. The local fund cess levied on land revenue provides an insignificant amount for rural roads.

Funds for road construction and maintenance should come not only from the direct beneficiaries, i.e. the motor vehicles but also from those to whom indirect benefits accrue from the development of roads. Some of the sources which may be tapped for raising additional resources for road developments are betterment levy, road cess on land revenue, tax on vehicles other than motor vehicles, and on diesel oil used for motor vehicles and tolls on projects of major magnitude like big bridges or specific high class roads which provide special facilities.

9. The overall expenditure on new construction and maintenance of roads during 1961-62 to 1980-81 is expected to be about Rs. 6,550 crores, and if the production of automobiles can catch up with the trend of anticipated demand, the revenue from road transport during these years will total up to about Rs. 6,150 crores. The gap of Rs. 400 crores in 20 years can be made up various ways as indicated in para 8.

10. Forward Planning is an essential pre-requisite to an efficient and economical execution of road works. Full assurance of funds from the very beginning is, therefore, necessary.

11. Besides the Central and State Public Works Departments, road works in India are presently looked after by autonomous Local Bodies, Panchayats and Community Development Administrations. Financial limitations and difficulty in attracting suitable technical hands have, however, been a serious handicap with most of our local bodies as a result of which their supervision of road works has not been very fruitful. Provincialisation of the engineering staff of the Local Bodies should improve matters considerably.

12. For ensuring efficient execution and maintenance of roads, all classified roads except the classified village roads, should be under the State or Central Public Works Departments, or the Highway Departments as the case may be. The Classified Village Roads may be under the panchayats to whom the State Public Works Departments should give necessary technical advice.

13. National Highways should be entirely the responsibility of the Central Governments. All other classified roads should be the responsibility of the State Governments.

14. Design, construction and maintenance of highways are intimately connected with traffic development and safety requirements. The Highway Department in the States should therefore, have a suitable cell to deal with traffic engineering road standards sizes and weights of vehicles, and provision of amenities for road users.

15. Close technical co-ordination is essential to ensure an efficient and successful implementation of the Plan. The present method of utilising the forum of the Indian Roads Congress for achieving this objective has proved successful and should be continued.

16. With the enormous growth of traffic the technique of highway construction and maintenance needs specification. It is, therefore, necessary to provide a two years' course for professional training to the department at the commencement of service. The practising highway engineering should also be kept abreast of development highway engineering and technique by providing refresher courses.

17. Land acquisition proceedings at present take inordinately long time which results in delays in the execution of road schemes. Appointment of special land acquisition officers working under the Chief Engineers would improve matters considerably.

18. The present procedure of tackling encroachment cases through courts is very ineffective. The question of vesting necessary authority in the road engineers so as to enable them to take direct action needs consideration.

19. Research plays an important role in road development. All the States should have well-equipped road research laboratories. To begin with testing and control laboratories should be provided immediately, some of which could gradually develop into full-fledged research centres. A detailed and organised survey of road building material should be carried out. The co-ordination of research activities of the various laboratories should be done by a Central Organisation.

20. On arterial routes, missing bridges should be given the highest priority and the hard crust should be widened to two lanes and upgraded to withstand the load of heavy truck-trailer combinations. High priority should also be given to improvement of rural roads to fair weather standard, including the provision of cross drainage works, so that traffic is not dislocated too frequently.

21. Full benefit from expenditure on road construction can be derived only by ensuring proper maintenance of the roads. The expenditure on the maintenance of roads in India has so far been inadequate. The requirements of annual maintenance are expected to rise from about Rs. 30 crores in 1960-61 to Rs. 135 crores in 1980-81. Steps have, therefore, to be taken to provide adequate funds for this purpose.

22. Road construction and maintenance can provide employment for a very large number of skilled and unskilled labour. It has been estimated that the number of skilled and unskilled labour required for implementation of the Plan would rise from about eight lakhs in 1961-62 to 42 lakhs in 1980-81.

23. As regards technical personnel, it would be necessary to increase the annual intake of graduate engineers from about 400 in the 1st year to about 750 in the 20th year, diploma holders from about 1,140 in the first year to 2,150 in the twentieth year and other technical personnel (draftsmen, tracers, surveyors etc.) from about 1,200 in the first year to 2,400 in the twentieth year.

24. The requirements of roads making materials and transport vehicles has been estimated as follows :

#### Road Making Materials

	First year Tons (‘000)	20th year Tons (‘000)	Total for 20 years Tons (‘000)
(1)	(2)	(3)	(4)
Cement . . . . .	400	2,000	24,000
Bitumen . . . . .	300	1,200	15,000
Mild Steel . . . . .	60	340	4,00
High tensile steel . . . . .	5	25	3,000
Special Cast steel for bearings (Bridges) . . . . .	1	7	60
Transport Vehicles . . . . .	First year		20th year
Trucks . . . . .	8,000		30,000
Bullock-carts . . . . .	30,000		1,10,000

25. The rise in the demand of road making machinery will be very appreciable in certain cases, as the plan progresses. For instance, the requirements of road-rollers will rise from 2,400 in the beginning to 6,400 towards the end of the plan and that of the motor graders from 400 to 1,200. A consolidated list of equipment required for the implementation of the Plan is given in the Report.

26. Certain types of road-making machinery like flat rollers, sheep-foe rollers, pumps, stone crushers, tar boilers and concrete mixers are already being manufactured in the country. Their rate of production is however, not adequate and needs to be stepped up. Steps need to be taken also to start manufacturing motor graders, bitumen mixers and bitumen pressure distributors because the number required is quite appreciable. A concerted effort is necessary to step up the manufacturing programme of all road-making machinery already being produced in the country and to devise ways and means to commence manufacturing other machinery.

27. As it will take some years before heavy earth moving equipment and some other types of road making machinery are manufactured in the country it would be necessary to import such equipment from abroad for some years. It has been roughly calculated that this will involve foreign exchange of about Rs. 80 crores from 1961 to 1981.

## ANNEXURE IV

### MAIN FINDINGS & RECOMMENDATIONS OF THE COMMITTEE ON RURAL ROADS

A one man committee was set up by the Ministry of Transport, Government of India under the Chairmanship of Shri H. P. Sinha, in 1967 to study and report on the problems of development of Rural Roads in the country. The Report was published in 1968. The main tasks of the committee were as follows :—

- (i) To advise on the broad principles for the preparation of a phased programme for the development of rural roads to enable optimum utilisation of available resources from various directions for such roads;
- (ii) To suggest methods for ensuring that specific resources are earmarked for the construction of rural road;
- (iii) To indicate the basis for determining *inter se* priority between various categories of rural roads in the States;
- (iv) To advise on measures for the planned execution of the rural road programme, and on coordination of the work of the various agencies employed at present in states on rural road construction;
- (v) To advise on measures for the proper maintenance of rural roads; and
- (vi) To advise on the mechanisation of rural road construction, maintenance and effective measures for obtaining the necessary maintenance equipment.

#### *Scope of Rural Road*

The committee defined Rural roads as those roads which serve predominantly the needs of villages and provide communication, not only between one village and another, but also from one village to mandi (market place) or to a main route. The rural roads will include village roads and other District roads only.

### Target of Work

The Committee has suggested that the targets for road development for the next 20 years need not be kept any higher than those indicated by the Chief Engineer. Therefore, the Committee envisages the development of a total length of 3,24,000 Kms. of village roads and 23,04,000 Kms. of other District roads. The cost will be Rs. 535 and Rs. 895 crores respectively i.e. total Rs. 1,430 crores.

### Main Recommendations

#### Resources for Rural Road Development

For achieving targets of the Chief Engineer's 20 years plan, the Committee has suggested that the capital expenditure required should be spread out as follows:—

4th Plnn . . . . .	Rs. 265 crores
5th Plan . . . . .	Rs. 395 "
6th Plan . . . . .	Rs. 385 "
7th Plan . . . . .	Rs. 445 "
<b>TOTAL . . . . .</b>	<b>Rs. 1,430 crores</b>

At least 1/3rd expenditure on capital works should come as contribution from the people. The money so contributed should be utilised in that very area. There should be an assurance of minimum fund for the Rural Roads Programme. For this purpose a portion of specific revenue which pertains directly to roads (such as diesel tax) might be earmarked. It is estimated that Rs. 150 crores were collected through diesel tax in 1967-68 and this amount would rise to Rs. 220 crores by 1971. Each State should pool together all the resources earmarked for developing Rural Roads and should spend through a unified agency. The Committee estimated the maintenance expenditure at Rs. 15 crores per year in the 4th Plan period which could rise to Rs. 50 crore per year in the 7th Plan period. The fund for this purpose should, in full, be arranged by the Government and Local Bodies. As a measure to reduce the maintenance expenditure, the Committee suggested that the Government should promote the use of pneumatic tyred wheels in bullock carts by subsidising half of the cost involved in the initial change-over and by other incentives like tax rebate on pneumatic tyred carts and by giving preference to rural road construction in those areas where this change is accepted by the

### *Basis for Inter-se Priority*

The Committee has suggested the following four priorities in phasing the 20-year rural road development programme :—

- |   |     |
|---|-----|
| (i) Areas where special steps have already been taken for rapid increase in agricultural production, e.g. under the programme of Intensive Agricultural Districts . . . . . | 40% |
| (ii) Areas where villages will get connected to the existing road system by constructing just few short lengths of rural roads . . . . .                                    | 20% |
| (iii) Backward area . . . . .   | 20% |
| (iv) Areas where no other means of transport are available . . . . .  | 20% |

### *Organisation Set-up*

In order to have effective coordination in the widely dispersed works of Rural Roads, it is necessary to have a high level Board in each State for examining the broad aspects of planning and allocation of funds, as well as for evaluating the progress. A similar body at the Centre is also necessary. These bodies should be presided over by eminent persons and the membership should be drawn from :

- (i) Member of Parliament and Legislative Assembly.
- (ii) Member of Local Bodies.
- (iii) Senior Government Officers of concerned Department.

For receiving undivided attention, all the rural works, in a State should be looked after by a separate full-fledged Engineering Department headed by a Chief Engineer. Till such time, the work load does not justify the creation of a separate cell for rural roads, it should be put under the charge of Chief Engineer of some Engineering Department e.g. Highway Department, but the charge of actual execution should be given to an officer of the rank not less than Executive Engineer.

The smaller Local Bodies, namely the Panchayat and Panchayat Samiti should be given maximum powers as their works will be small and of local importance. There should, however, be coordinating committees in district and regional levels for works pertaining to the Zila Parishads.



### *Maintenance of Rural Roads*

The Committee attaches importance to the maintenance of the rural roads. Since the past experience shows that major part of the village road constructed by the Department of CD & NES has vanished due to lack of proper maintenance. A judicious use of men and machines, will provide the most of appropriate answer to the vast problem. The Committee recommended the use of motor grader for maintenance of roads. Some relief may be given by the Government by waving off or reducing custom and excise duties on motor grader.

### *Maintenance and Utilisation of Machinery*

For economy and efficient utilisation of machineries the Committee has suggested that a pool of machinery should be formed for 5 to 6 Districts with spare part facilities and formation of Central workshops for providing repairing facilities for the equipments.

## ANNEXURE V

### SUMMARY OF RECOMMENDATIONS OF THE STUDY GROUP ON MOTOR VEHICLES TAXATION

#### *Central Series*

1. The Union Government should set up a Central Bureau for studying the problems of taxation on motor vehicles on a systematic basis. This Bureau can follow the guidelines that the Road Transport Taxation Enquiry Committee may formulate, balancing from year to year, the need for ensuring uninterrupted flow of trade and commerce with the ways and means requirements of the various States.

#### *The Motor Vehicle Tax*

2. The Inter-State Transport Commission should allocate the number of regular permits for Inter-State routes, taking into account the stages of transport development in the different areas and also their traffic requirements. The Commission should keep the current revenue of the States from motor vehicles also in view while determining the number of inter State permits that may be issued by each of them. The States, which are unable to issue all the permits that they are entitled to, should devise suitable incentives to induce expansion of their vehicle registrations instead of resorting to taxation of vehicles registered elsewhere.
3. The distinction between temporary and regular permits in the matter of taxation should be given up simultaneously with conversion of temporary permits into a reasonable number of regular permits.
4. Immunity from tax should be extended to all corridor routes of a length of 50 miles and less subject to the condition that the vehicles do not pick up or deliver passengers or goods within the corridor. This immunity should cover passengers and goods taxes also, if the States do not see their way to accepting any of the alternatives to these taxes.
5. The tax assessed in respect of each vehicle should be correlated to the weight restrictions, if any, laid down for the route or area covered by the permit of the vehicle. In other words, the tax on the vehicles should not exceed what is payable on the basis of its permissible laden weight for that area or route, unless the vehicle can carry its full load over a good part of that area or route.

6. Tax should be classified not merely according to the actual carrying capacities of motor vehicles and the load limits enforced on different routes but also with reference to the length and traffic potential of route or area of operation for which a permit has been issued. An *ad-hoc* reduction of 25% to 50% of the normal rates, depending on the operational conditions obtaining in the urban or rural area concerned may be justified.

7. A graded scale of tax, based on the distance covered by a vehicle outside its home State and not on the number of States through which it passes or the rates of taxes in force in those States, may be adopted. The tax liability in respect of routes outside the State limits may be fixed with reference to an absolute all-India standard. It may be Rs. 2,500 per annum for a vehicle which has a pay-load upto 7 tonnes (corresponding to RLW upto 11 tonnes) or Rs. 3,000 for a vehicle which has a pay-load of over 7 tonnes (RLW of over 11 tonnes) and which has a permit for a route 600 miles or above in length outside the home State. The extra-state route mileage may be reduced by 50 miles for the purpose of the calculation.

8. The standard rate may be divided into the following slabs:—

Distance	Tax-Payable
First 50 miles outside the "Home State" (The state of registration of vehicle)	Nil
From 51 to 150 miles outside Home State	25% of the Standard tax.
From 151 to 350 miles outside Home State	50% of the Standard tax.
From 351 to 600 miles outside Home State	75% of the Standard tax.
Over 600 miles outside Home State	100% of the Standard tax.

9. The standard tax proposed above takes goods/passenger tax payable by a vehicle into account and, therefore, there should be no additional liability for these taxes in any State other than "Home State".

10. On a balance of considerations, the second best alternative to a standard inter-State tax should be an additional Central Fuel Import or diesel oil.

11. If the Standard Tax, recommended in para 7, is introduced or excise duty on diesel oil is increased by just over 0 paise per litre, the revenue that the "transit" States may forego, if they exempt outside vehicles with inter-State permits from motor vehicles, goods and passenger tax, will be more than made up.
12. A working formula for distribution of the proceeds of the additional diesel levy among the different States can be framed with reference to the sum of (a) length of surfaced roads in a State and (b) 25% of the length of the National Highways in the State. The needs of areas like Delhi, Goa etc., which do not have large road mileage but the traffic importance of which is considerable, can easily be met by reserving for them a percentage of the total revenue collected before distribution as above.
13. Implementation of the above arrangements will necessitate suitable amendment of the State Motor Vehicle Taxation Acts and the Taxation on Passenger and Goods Acts. The States will have to provide for levy of the Standard inter-State tax in lieu of the local taxes and for the assessment and collection of the levy, on behalf of the States or as its agents, by other States.

#### **Passenger & Goods Tax**

14. The distinction between vehicles which carry goods for hire or reward and those which carry the owners' own goods has no justification. There had been a steady increase in the number of trucks operated "on own account" as against public haulage vehicles as a result of the existing licensing and taxation policies; and thus, an undesirable trend which requires to be arrested.
15. The taxes on goods and passengers carried by road should be merged with the tax on vehicles. Such consolidation does not imply a reduction in the aggregate revenue, since the tax on motor vehicles, which is elastic, can be raised to a sufficiently high level to cover the current and expected revenue from all the taxes together. If, however, this proposal is not acceptable to the State Governments, vehicles registered outside the State and plying on inter-State routes should be exempted from the local levies, by adaption of the Standard Tax recommended in para 7 above.

#### **Motor Vehicles Fees**

16. Fees are meant to cover cost of administration. A consistent and rational scale of fees or a formula, commensurate with the actual cost of the services rendered should be drawn up on all-India basis. In working out any scale or formula, it should be borne in mind that (i) countersignature or renewal of a permit does not call for any significant additional labour and that not more than a small proportion of the fee payable for such services in respect of the original permit should be levied, (ii) it would not be expedient for a State to have two sets of fees, one for vehicles registered in the State and another which

is higher, for vehicles registered outside, and (iii) the value of a route or area, permit of the registration of a vehicle etc. in the operator concerned would be an extraneous factor in the assessment of fees.

### Local Levy (Octroi etc.)

17. Octroi is an incurably bad levy. It should either be replaced by a more rational and less primitive form of taxation or suitable increases should be made in the rate of the existing taxes to make up for the diminution in resources, which its abolition may entail.

18. The following suggestions, which have been made from time to time by various bodies and individuals in connection with the proposal to abolish octroi should be implemented by the States with reference to their individual needs and circumstances:—

- (i) Imposition by State Government of surcharge on sales tax on specific commodities with reference to local conditions and needs;
- (ii) a turnover tax depending on sales of certain commodities within municipal limits;
- (iii) earmarking of a portion of States' revenue from motor vehicle tax and its distribution among the concerned municipalities on the basis of their population, financial requirements, importance from the traffic angle etc.;
- (iv) construction of by-passes sufficiently far from municipal limits to avoid extension of the limit to envelop them; and
- (v) provision of a radial free way, where feasible, for "through" or transit traffic.

### Cognate Matters

19. Multi-purpose check-posts for sales tax, excise and motor vehicle etc., equipped with automatic ticket weight bridges may be installed, where necessary, inter-State borders to be manned jointly by officers of the States concerned either by the rotation or simultaneously.

20. The State Government may provide check-posts with rest-rooms and canteens for drivers, garages or repair for vehicles, and mobile break-down vans for dealing with vehicles which may be obstructing traffic on the highway.

21. The procedure in Mysore, where transport companies are not being asked to unload goods if they undertake to deliver them to consignees only after they furnish the necessary documents to the sales tax department, may be adopted in the other State also.

22. The forms that are used by operators should be standardised so that they become self-explanatory. The Union Ministry of Transport might review each of the forms that a vehicle has to carry for different purposes in consultation with the State Governments.

23. Additional information with regard to the value of the consignment, sale tax registration number of the consignor and consignee and confirmation that the sale tax has been or will be paid may be included in the form of way-bills evolved by the Transport Ministry in 1963.

24. The State Governments should advise their enforcement authorities not to attach undue importance to minor details and inconsistencies while checking vehicles at the barriers.

25. Federal standards and procedures should be prescribed for the various aspects of operation of vehicles of Inter-State routes so as to achieve uniformity.

26. The State Governments may, as a covention, refer all disputes relating to motor vehicle taxation on inter-State routes to arbitration by the Inter-State Transport Commission.

27. Collection of all the taxes on motor vehicles, including goods and passenger taxes, should be entrusted to a single agency, preferably the department which issues permits for transport vehicles.

28. Operators' organisations should be built up for providing a "tax service" to their members. This machinery can also be employed to make the operators alive to their rights and duties and to distribute standard forms, way bills and other statutory returns etc., among the operators with suitable instructions for their maintenance and submission. Such a service can be introduced in cities where there is heavy concentration of commercial vehicles, e.g. Bombay, Calcutta, Delhi and Madras and can be extended to other places in due course.

## ANNEXURE VI

### SUMMARY OF THE RECOMMENDATIONS MADE BY THE ROAD TRANSPORT TAXATION ENQUIRY COMMITTEE

#### A. Recommendations made in the interim report "Inter-State Transport"

- (i) There should be central legislation to lay down uniform principles of taxes (on motor vehicles) and licensing thereof for the whole country. The Government should examine whether the existing entry 42 in the Union List in the Seventh Schedule to the Constitution covers taxation on motor vehicles engaged on inter-State routes. If this is not so, the Constitution may be amended suitably to provide for control of taxation on inter-State transport by the Inter-State Transport Commission.
- (ii) A commercial vehicle should be registered in the State where it is normally kept and a primary permit in respect of it issued by the home State. The vehicle will pay all the necessary taxes to that State, including road tax and tax on passengers and goods carried in the vehicle. A vehicle, which desires to carry inter-State traffic, will have to obtain an additional permit (which will be, in fact, an extension of the primary permit) which should be granted by the Inter-State Transport Commission. The legislation that may be undertaken by the Government of India or empowering the Commission to collect taxes in inter-State transport should specifically provide for the assignment to State of the proceeds of the levy so imposed and the principles of distribution thereof. The quantum of tax to be paid by vehicles employed in inter-State transport should be settled after consulting the State Governments.
- (iii) The Inter-State Transport Commission should be reconstituted, ~~as~~ <sup>now</sup>. The reconstituted Commission should be given all the powers at present mentioned in Section 63(A)(2) of the Motor Vehicles Act and also the powers mentioned in the Rules framed under Section 63-Q of the Act by including them in the substantive law. The Commission should have a Chairman of high status, preferably chosen from public life and two other full time members, who have wide experience of administration or transport or finance or economics. The Commission should have a high status similar to that of Union Public Service Commission, Forward Markets Commission, Tariff Commission, etc.

**B. Recommendations made in the interim report on "Octroi and other Check Posts".**

- (i) Octroi (including terminal tax and tolls) is a vexatious and out-moded form of taxation and should be abolished as quickly as possible in the States, where it is still levied.
- (ii) The loss in revenue due to abolition of octroi/terminal taxes may be made up by alternatives, such as surcharge on sales tax, Municipal sales tax, Municipal surcharge on sales tax and Municipal turnover tax or a combination of these. According to the Committee the Municipal turnover tax is preferable. But it should be left to each State Government to select the alternatives which suit them best.
- (iii) Section 15 of the Central Sales Tax Act places certain restrictions in respect of the rate of sales tax or purchase tax on "declared goods" specified in Section 14 of that Act. In levying municipal sales tax of turnover tax, these restrictions may be relaxed and the Central Government may allow States to levy tax on sugar, tobacco and textiles without forfeiting their share of additional excise duty.
- (iv) The existing check posts, set up by the State Governments are a great impediment to movement of traffic and slow down traffic. The system of check posts should be completely reorganised and the number of check posts reduced to the minimum. The multiplicity of check posts such as those for Sales Tax, Transport Department, Police, Prohibition, Smuggling, Forest and Civil Supplies Depts. may be converted into a consolidated check post organisation created to serve the needs of the various departments concerned.
- (v) The combined check posts should be equipped with ticketed weigh-bridges and should be located at sufficiently long distances.
- (vi) The system of flying squads may be adopted for further checking and motor vehicle offences may be dealt with by Mobile Courts.

The above recommendations raise issues of policy which require careful consideration. Moreover, matters relating to abolition of octroi and its replacement by one of the alternative levies, suggested by the Road Transport Taxation Enquiry Committee, primarily concerned the State Governments.

**C. Recommendations contained in the final report**

The final report of the Road Transport Taxation Enquiry Committee was submitted to Government on 29.11.67. The following main recommendations have been made in its report :

- (i) The existing level of taxation on motor vehicles Central and State, has become a disincentive to the growth of road transport industry.



Some relief should be given, or at least no further changes, should be made in the existing level of taxation, except after mature consideration in the light of the principles enunciated by the Committee and with reference to the advice of the expert advisory bodies proposed in (ii) below.

- (ii) The Central and State Governments should set up standing expert advisory bodies consisting of persons who have special knowledge of problems relating to road transport industry/administration/economics/finance to review, from time to time, the working of the road transport industry with special reference to the impact of taxation thereon and formulate suitable proposals for consideration of the Government concerned.
- (iii) In determining the quantum of any tax, the following principles should be taken into consideration, in addition to the financial requirements of the States:
  - (1) Cost of operation.
  - (2) Prevailing fare and freight rates.
  - (3) Utilisation of vehicles as detailed below:—
    - (a) Distance travelled.
    - (b) Frequency of services.
    - (c) Carrying capacity.
    - (d) Load factor.
    - (e) Area of operation.
  - (4) Capacity of the industry, the transport users and the public to bear the tax burden.
  - (5) The general level of development in the region and nature of terrain.
  - (6) General price level prevailing in the State.
  - (7) Programmes of road construction and maintenance; and
  - (8) Impact of the growth of economy.
- (iv) The above principles should apply to all taxes levied by the Centre and States.
- (v) Parliamentary legislation should be enacted, laying down uniform principles of motor vehicles taxation throughout the country.

- (vi) The number of taxes affecting motor vehicles should be reduced to the minimum and it would be preferable for all the States taxes to be collected by a single agency. Fuel tax is an ideal way of realising revenue from motor operation.
- (vii) Uniformity in tax procedures in the first step for rationalisation of the tax structure on an all-India basis. It is, therefore, necessary to have, in the first instance, registered laden weight, as the basis for computation of motor vehicle tax for goods vehicles.
- (viii) In the case of state carriage, in addition to carrying capacity, the basis of motor vehicle tax should be the permitted daily mileage.
- (ix) State carriages operating on short routes with low frequency of services should be given tax rebate.
- (x) The Central and State Governments should consider a concessional rate of tax for light commercial vehicles of a pay-load of 1 tonne or less.
- (xi) Government should take early and urgent measures to bring down the prices of commercial vehicles substantially.
- (xii) Because of the nature of the road transport industry, it is desirable to allow it to earn a return on capital larger than that in other industries.
- (xiii) If the country is to benefit from the contribution which roads and road transport should make to economic and social development, there is no escape from earmarking considerably more funds for development and maintenance of roads than is done at present.
- (xiv) There should be uniform permissible laden weights in all States, on inter-State routes and particularly on National Highways. Expeditious action is necessary to bring all National Highways to the required specifications in the interest of promotion of tourism and the cultural and emotional integration of the country.
- (xv) Contract carriages, running on regular temporary or special permits outside the Home State, should not be required to pay any other tax or fee in the States travelled by them.
- (xvi) While it is necessary to subject goods vehicles operating outside the home State to an additional tax, known as inter-State Standard Tax, inter-State passenger vehicles need not be subjected to such additional tax liability at present.
- (xvii) The committee does not recommend regulation of freight rates by State Governments. This should be left to be determined by the conditions of demand and supply.

- (xviii) Goods booking agencies should be regulated and this business be brought under control by a licensing system.
- (xix) Development rebate which has been withdrawn, should be stored for the expansion of road transport which should be included in the list of priority industries entitled to tax relief.
- (xx) It should be ensured that adequate supply of capital is available to private operators and State Road Transport Undertakings for purchases of vehicles.
- (xxi) Tax should not be levied in the guise of fees which are to be charged for specific services rendered.

## ANNEXURE VII

### SUMMARY OF CONCLUSION AND RECOMMENDATIONS MADE BY THE STUDY GROUP ON ROAD TRANSPORT FINANCING

1. The Study Group have estimated that the amount of the loans and advances to be provided from organised institutions to the operators will have to be increased to Rs. 100 to Rs. 125 crores per annum in 1970-71, as compared with about Rs. 60 crores at present. Therefore, the additional requirements might be about 10 to 15 crores every year during the next five years.
2. The capital cost of a commercial vehicle has been increased already, mainly because of government levies, upto a point at which further investment by transport operators on new vehicles and the replacement of the existing vehicles is becoming difficult. Government and the automobile manufacturers must explore ways and means of arresting any further increase in prices, not if possible of reducing the cost and improving the quality of the vehicles.
3. Government's decision on the report of the Road Transport Taxation Enquiry Committee under Dr. Keskar, should be taken and announced very early. As far as possible, the need for establishing and reducing taxes should be taken in consideration. The additional revenue, resulting from an accelerated rate of development of road transport, will in the opinion of the Study Group adequately compensate the Governments for any restraint in increasing the level of road taxes any further.
4. In the interest of making transport by roads safe and more attractive godown and storage facilities, insurance of goods while in transit and standardisation of commercial practices relating to the treatment of lorry receipts as documents of title for goods will be necessary. Commercial banks and insurance companies, respectively, should provide the necessary facilities for this purpose.
5. The study group has recommended that in the interest of orderly growth of hire-purchase finance in this country and financing of the road transport industry in particular, high priority should be accorded to the Hire-Purchase Bill and it should be enacted and brought into force as early as possible and its provisions should be applicable to motor vehicles in the same manner and to the extent as in the case of other goods. The Study Group has further suggested that it is not at this stage necessary to provide for licensing of hire-purchase finance companies.

6. The liberal interpretation of the provisions of Section 3 of the Banking Regulations Act, 1949, permitting banks to obtain certain types of documents or safe-guarding their interests, while advancing loans directly or indirectly to transport operators, should be brought to the notice of the banks concerned.

7. The development rebate, which was originally granted to the road transport industry, should be resorted. The road transport industry should also be treated as a priority industry, entitled rebate from income tax at a rate of 8%. Companies and Corporations entitled to this rebate should agree to refund the amount of this rebate, for the purpose of financing the acquisition of new or the replacement of old vehicles.

8. The study group has suggested that after the other recommendations in their report have been accepted and implemented, the question of simplifying the scheme for guaranteeing loans and advances granted to small scale industries so as to cover the small road transport operators, should be considered by Central Government in consultation with the Reserve Bank of India.

9. The manufacturers of automobiles and the larger dealers should consider whether new hire-purchase finance companies cannot be promoted by them for mobilising resources and assisting the operators.

10. The existing hire-purchase finance companies should, with a view to qualifying for assistance from commercial banks and Industrial Development Bank of India, improve the methods of working and operation, particularly by (a) conforming to the directions issued by the Reserve Bank and maintaining register in the form of the returns prescribed by the Bank, (b) segregating the cash credit accounts relating to hire-purchase transactions, which are eligible for finance and (c) increasing their paid-up equity capital, free reserves for bad and doubtful debts and contingency or inner reserves, over a period or time.

11. The State Road Transport Authorities should carry out a systematic survey of the areas in which road transport can be developed, within the respective States and the State Financial Corporations should consider the grant of direct loans to larger number of transport operators.

12. Transport Cooperatives providing specialised and service facilities to the road transport industry should be promoted, wherever this is feasible, and the question of establishing cooperative hire-purchase finance should also be examined.

13. As a measure to augment more resources, the Road Transport Corporations in the public sector should also consider whether, like State Electricity boards, they can borrow certain limited amounts in the open market against the guarantee of the concerned State Government. For this purpose and also on other consideration, the public sector Road Transport Undertakings, which are not already incorporated under the Road Transport Corporations Act, 1950, should be constituted as independent autonomous Corporations.

## ANNEXURE.VIII

### SUMMARY OF THE RECOMMENDATIONS OF STUDY GROUP ON VIABLE UNITS

(i) There should be a network of transport associations in the country, the last ring in the ladder being viable units. In each district, road transport associations should be formed. These viable units might be affiliated to District Associations, the District Associations should, in turn, be affiliated to State Associations and State Associations to all-India Road Transporters Association. That is to say operators should find themselves associated not merely, at the district level but should also find their way to national levels. The Group feels that the cause of road transport industry will be better served, if the industry is suitably recognised so that the operators are able to ventilate their grievances and seek redress in an effective manner through the forum of association.

(ii) A viable unit should consist of at least 10 vehicles in goods transport and 5 stage carriages with a spare bus in the case of passenger transport. (The group did not recommend a spare truck for viable unit in goods transport). In recommending the above size for stage carriages, the group has assumed a stage carriage will do 36,000 miles in a year.

A viable unit can be formed of:—

- (a) an individual;
- (b) a proprietary or partnership form;
- (c) a joint stock company, public or private;
- (d) a registered co-operative society, including service co-operative;
- (e) an association of vehicle owners to be duly registered under law to be framed for the purpose, if necessary.

(iii) The test of viable unit in the transport field is that it should have (a) a Central or unified organisation of any character, servicing (b) provided

activities for booking of goods and passengers; and (c) provide repairing and other facilities. Such a viable unit should be recognised under the Motor Vehicles Act.

(iv) In the matter of granting permits, although for an effective control over the vehicles of the viable units, permits should be granted in the name of viable units yet the group felt that it may not be advisable to do so, at this stage when a considerable number of single operators exist in the country.

(v) To encourage the small operators to form viable units, they should be given incentives in the nature of 10% rebate on motor vehicles, tax for the first 5 years, preference in the matter of counter-signature, rebate in insurance premium and other such facilities which are available to big fleet owners.

(vi) Persons having ten trucks or five buses in the aggregate can join together and form an Association to be duly registered for providing service, including repair facilities, making arrangements for booking and forwarding of goods and such other functions which will ensure more efficient services. Every such association should be a registered body and should discharge all such duties as may be prescribed by the State Governments. In such a set up, the property rights over the vehicles will continue to remain with the owners of the vehicles and will not vest with the Association. In the same way, the permits will also remain with the member-operators, while the Association stands as an independent organisation giving service facilities to its affiliated members. Although such an association will not itself be a viable unit, the members thereof will be considered as members of a viable unit and would be entitled to the same facilities and incentives as any other viable unit.

If, for any reason, any member of a viable unit is dissatisfied with the working of the unit, he may recede from that particular unit and join another unit in the area. However, a member operator should not be allowed to exercise this option other than once in a year.

(vii) Small operators can also organise themselves into service co-operative societies or providing the common facilities. The members of such a society will also be considered as members of a viable unit.

(viii) There should be no compulsion by State Governments in the formation of viable units. These units should spring up voluntarily and spontaneously.

(ix) In the interest of proper development of road transport, Government should take steps to educate small operators on the desirability of formation of viable units. If, in spite of the incentives, a single vehicle operator is not willing to join a viable unit, he will still be allowed to continue to function.

(x) The State Government may have to incur an expenditure of about Rs. 6 crores per annum on account of tax rebate to viable units. The share of each Government will not exceed Rs. 50 lakhs per annum. This according to Study Group's estimate, will give the industry an additional income of Rs. 40 crores per annum and would create a demand for 4000 additional vehicles per annum. This in turn would increase the State resources.

(xi) To remove the uncertainty in the mind of private operator in regard to nationalisation of road transport service the Government should draw up and publish their time-schedules of nationalisation of passenger transport.

Likewise, they should also examine whether it is necessary to enter the field of goods transport and, if so, formulate specific schemes in this regard for inclusion in the plans. If this is done, operators will now know where exactly they stand vis-a-vis nationalisation and will be encouraged to invest in the road transport industry because they will have the certainty that they will not be dislodged from their present business for a reasonable period.



## ANNEXURE IX

### MAIN CONCLUSIONS AND RECOMMENDATIONS OF THE COMMITTEE ON TRANSPORT POLICY AND CO-ORDINATION

The committee on Transport Policy and co-ordination was set up in July, 1959, under the chairmanship of Shri K. C. Neogy. The Committee Submitted its report in 1966. The specific recommendations of the Committee are:—

#### 1. Road Development and Road Policy

Roads are so crucial to national and regional development and resources involved are of such substantial magnitude that the careful planning and constant search for economy must be regarded as the keystones of road programmes in future, whether these are undertaken by the Centre or the States or by Local Authorities.

In view of the large investment involved, the Committee recommended adoption of economic criteria in the selection of road works to the utmost extent possible cost benefit analysis.

The road plans should take full account of the industrial and other development needs as these are likely to arise over a period of years. The specific recommendations of the Committee on road planning are :—

1 Centres should develop the National Highways system steadily since these form the important trunk routes. The Centre should increasingly assist in the construction of selected roads which provide inter-State links and have specific economic importance because these roads are a convenient and flexible means of removing important gaps in communication between states and also these roads are important both from national and regional point of view.

2 The state, on the other hand, should pay more attention to the development of rural roads and improvement of road communication in the economically backward areas. In case of rural roads, priority should be given to areas in which intensive agricultural development plans are being undertaken or where new resources, such as irrigation and power, have come into use and their fullest utilisation along with complementary development is likely to promote rapid economic growth.

3 For the development of rural roads, the State should earmark a certain portion of their funds—a minimum of the 1/5th of the State allocation for roads. Centre should give assistance for development of rural roads as well as roads in the backward areas. The amount of grant in both the cases should be 1/3rd of the outlays incurred on them by the State.

4 In the metropolitan areas and other large cities, it is necessary to take long term view of transport needs, both for passengers and for goods. The transport planning in the cities has to be closely related to the scheme of long term urban planning and location of industrial and economic activity.

5 Suitable norms should be established for the maintenance of roads especially National and State Highways.

6 The Committee dittoed the recommendation of the Transport Development Council on the creation of Road Planning Board, both in the Centre as well as the States. These boards will consider plans of road development in the wider economic perspective and in relation to the economic and other criteria. Their task will be to ensure that roads can make maximum contribution to economic development.

7 In the interest of systematic long term road development, the Committee has stressed that the resources available from Central Road Fund at the Centre need to be enlarged. A flexible non-lapsing source of this nature, from which certain types of specific schemes can be initiated by the Centre has advantages which are not to be measured only by actual amount allotted.

Besides the above specific recommendations, the Committee made a number of other recommendations, vital for the construction of better roads. Precisely those are:—

1. Adoption of modern and advanced techniques in road construction. This would require opening of testing and control laboratories in all States which would work in association with Central Road Research Institute.

2. Setting up of a Highway Research Board at National level for collection and dissemination of the results of research done in the various laboratories.

3. Setting up of necessary organisation to check up that the research methods recommended for particular road works are properly applied.

4. To gain speed in operation and to ensure control over quality, road construction equipments should be manufactured within the country.
5. Creation of a central road construction agency with the Central Government which can supplement the State agencies to the extent necessary and.
6. Setting up of separate Highway Departments with the specialised highway and bridge engineering personnel for technical guidance and supervision in States where volume of road construction work is quite large.
7. Setting up of special Traffic Engineering Cells, in the Highway or Public Works Departments of the States devoted to and equipped for task of carrying out traffic studies and giving attention to the problems of traffic engineering and road safety.

## II. Road Transport

The regulation of road transport, conceived as a tool of planned and co-ordinated development, rather than as a restrictive device, has a functional role in the development of road transport in keeping with the growing needs of the economy and as an integral part of the total transport system of the country.

The following are the main recommendations on—

### Passenger transport

1. Although passenger services have to be licensed for specified routes, yet for future development of passenger services there is need for a regional approach. Such an approach stresses the requirements of local economy, helps adapt the forms of investment to the needs as established, ensures closer coordination with railway services and provides a continuing test of progress in reaching into the interior.
2. Special steps (like tax concession to operators etc.) should be taken to encourage the rapid growth of passenger road transport in backward districts and regions.
3. Inter-State passenger services should in future be licensed under the authority of Inter-State Transport Commission which no doubt will act in consultation with the States concerned. The present system of reciprocal agreements for number of permits to be issued should be abandoned.

The following are the main recommendations on goods transport.

### Intra-State Movement

In case of intra-State Goods Transport the concept of 'Region' as defined in the Motor Vehicles Act and the functions performed by the Regional Transport Authorities in the States (counter-signing permits) do not suit the needs

if the present time. For healthy development of road transport within the State, the focus in the regulation of road transport should shift from Region to State and its economic needs and also from Regional Transport Authority to State Transport Authority.

However, for development of certain backward regions, where transport facilities have considerably lagged behind the Committee recommended the need for integrated transport plans with special emphasis on the development of road network and to an extent licensing of vehicles on a regional basis accompanied by concessional tax rates and other incentives to operators to provide transport services in these regions.

#### *Inter-State Movement*

In case of long distance inter-state goods movement there is need for a powerful Inter-State Transport Commission (may be redesignated as Inter-State Road Transport Commission) with a full time Chairman, having wider powers and functions. The present practice of reciprocal agreement should be replaced by a system of inter-State permits, issued under the authority of the Inter-State Transport Commission. This body will work in close collaboration with the State Transport Authorities and Railways. The function of the Commission will be to access the requirements of Inter-State Transport over a given period of time on the basis of careful economic and technical studies. For this the Committee should be equipped with adequate machinery to elicit information concerning traffic requirements.

Having decided the quantum of traffic requiring long distance inter-State permit, over a given period of time, the permits could be issued by the State Transport Authorities on behalf of the Inter-State Transport Commission. The number of permits to be issued by each state to its operators could be decided on some agreed principle of equity, such as, route mileage, volume of traffic originating etc.

For uninterrupted movement of the vehicles moving on long distance inter-State route, the Committee suggests that for these vehicles some common colour should be prescribed to be adopted throughout the country.

By putting through the above scheme, the Committee feels the scope for temporary permits will reduce considerably. Temporary permits should become an exception to be resorted to only for meeting special and short-term needs.

#### *Regulation of Freights and fares*

To make coordination between rail and road transport more effective, the State Legislation should clearly empower the State Transport Authorities to fix both the maximum and minimum fares and freights and also that there should be strict enforcement of these fares and freights. For better enforcement of this, the Committee feels that establishment of Association of Road Transport Operators, both at regional as well as state level, may prove useful.

### *Strengthening Road Transport*

With a view to improve the efficiency of the present road transport industry the Committee recommended reorganisation of the industry in three main directions,

1. Small operators should be helped to join together to form viable units;
2. Cooperative transport undertakings should be actively promoted as matter of public policy; and
3. It is essential to provide in the legislation for formation at the State and regional level of associations of transport operators with specific functions and responsibilities.

### *Financing Road Transport*

The Committee has shown its concern, on the lack of facilities of finance in this sector. It has stated that unless banks and other financial institutions come forward to provide financing and refinancing facilities in a big way will not be possible to secure the development of road transport industry along sound lines or realise the measure of development envisaged for in the Fourth Plan. This is a problem of critical importance and dimensions as to demand the special attention of the Ministries of Transport and Finance and the Reserve Bank of India and the State Bank of India.

## STATE PARTICIPATION

### *Passenger Transport*

With the growth of towns and cities and more rapid development of the country side, the passenger transport services constitute a risk free highly profitable investment and essentially a public utility suitable for operation on public and semipublic basis. The Committee recommended increased participation of State, Municipal and Cooperative sector in this field and emphasised that the quality of management is the crucial factor in rapid development of road transport as public enterprise.

### *Goods Transport*

The Committee recommended State participation in goods transport on the following grounds :—

1. to supplement the effect of private operators to transport goods,
2. to help in developing undeveloped regions (hilly and backward regions, where private operators are not willing to come forward,
3. It will help in reorganising, and in filling in the gap in the present road transport industry, and
4. public undertaking can facilitate the active participation of the railway in long distance goods transport by road and thus promote over all transport development.

## **FUNCTIONS PROPOSED BY THE COMMITTEE ON TRANSPORT POLICY AND CO-ORDINATION FOR THE THREE MAIN BODIES SUGGESTED BY THEM FOR ACHIEVING CO-ORDINATION**

### **(1) *Transport Planning and Co-ordination Committee***

The existing Planning Committee on Transport, which guides the work of the Joint Technical Group, should be reconstituted and should function as the Transport Planning and Co-ordination Committee. The Joint Technical Group for Transport Planning, which is undertaking studies and economic appraisals should be strengthened and should serve as a Technical Secretariat of the Transport Planning and Co-ordination Committee. The Committee should meet at regular intervals and consider reports and studies, prepared by the Joint Technical Group and Research Organisations in the Ministries of Railways, Transport and Civil Aviation as well as in the States.

### **(2) *Central Committee of Ministers for Transport***

To facilitate consideration of important question of policy and to provide guidance, from time to time, to the Transport Planning and Co-ordination Committee and to the Ministries, the Committee suggested that the Prime Minister may constitute a Committee of Ministers, consisting of Ministers-in-charge of Railways, Transport and Civil Aviation, Minister of Industry, Minister of Planning, Minister of State in the Ministry of Finance, and Member of the Planning Commission in charge of Transport. The Prime Minister may appoint a member of the Committee to be the Chairman.

### **(3) *Council for Transport Coordination***

This body would be concerned with the general and overall problems of Coordination and, besides reviewing implementation of measures and policies pertaining to the Coordination of transport, would provide direction and guidance to the road transport industry and other interest as well as advise on programme of studies to be undertaken by the Joint Technical Group for Transport Planning, by research organisations in the Ministries and technical units established in the States. The Council would be composed of members of the Committee of Minister on Transportation at the Centre and State Ministers in-charge of Transport and Roads. The Council for Transport Coordination would supplement the work of the Transport Development Council specially in fields where considerations of policy demand united action between the Central and the States and the problems of transport sector as a whole have to be considered in their wider setting. The Chairman of the Committee Ministers would serve as Chairman of the Council for Transport Coordination.

## ANNEXURE X

### RESOLUTION OF CENTRAL ASSEMBLY RELATING TO CENTRAL ROAD FUND, 1929

1. There shall continue to be levied on motor spirit an extra duty of customs and of excise of not less than 2 annas per gallon, and the proceeds thereof shall be applied for the purposes of road development.

2 (i) From the proceeds of such extra duty in any financial year there shall be deducted a sum as near as may be equivalent to the share in such proceeds rising from taxed motor spirit used in aviation during the calendar year ending during the financial year concerned, and such sum shall be at the disposal of the Central Government for allotment as grants-in-aid of civil aviation.

(ii) The balance of the proceeds shall be credited as a block grant to a separate Road Fund.

(iii) For the purpose of this resolution taxed motor spirit shall mean motor spirit upon which the duty of customs or excise shall have been paid and in respect of which no rebate of such duty shall have been given.

3. (1) The Road Fund shall be allocated as follows :—

(a) a portion equal to twenty percent, shall be by the Central Government as a central reserve, this percentage being applicable with effect from the allocation due for the financial year 1948-49.

(b) Out of the remainder there shall be allocated by the Central Government a portion for expenditure in each State and Territory specified in the First Schedule to the Constitution as near may be in the ratio which the consumption of taxed motor spirit other than motor spirit used in aviation, in each area for which an allocation is to be made shall bear to the total consumption in the territory in India of taxed motor spirit, other than motor spirit used in aviation, during the calendar year ending during the financial year concerned.

(2) The portions allocated for expenditure in Part A States and Part B States shall be retained by the Central Government until they are actually required for expenditure in the manner herein after specified

(3) If in the opinion of the Central Government the Government of any Part A State or Part B State has at any time :—

- (a) failed to take such steps as the Central Government may recommend for the regulation and control of motor vehicles within the state, or
- (b) delayed without reasonable cause the application of any portion of the Road Fund allocated or re-allocated as the case may be for expenditure within the State.
- (c) the Central Government may resume the whole or part of any sum which it may at that time hold for expenditure in that State.

(4) All sums resumed by the Central Government from the account of any State Government as aforesaid shall be re-allocated between the credit accounts of State Governments and the reserve with the Central Government in the ratio of the main allocation for the financial year proceeding the year in which the re-allocation is made.

Provided that the sums so calculated as the share of the State from whose account the resumption has been made shall be credited to the reserve with the Central Government.

(5) Special additions to the Road Fund for financing particular projects may be accepted from sources other than that mentioned in para 2(2) which shall be kept in a Special Reserve and utilised for such projects.

4. The balance to the credit of the Road Fund or of any allocation there of shall not lapse at the end of the financial year.

5 No expenditure shall be incurred from any portion of the Road Fund save as here-in-after provided.

6 The Central reserve with the Central Government shall be applied first to defraying the cost of administering the Road Fund and thereafter upon such schemes for research and intelligence and upon such special enquiries con-



decided with roads and upon special grants-in-aid for such objects connected with road, as the Central Government may approve.

7. The sums allocated for expenditure in the States may, subject to the previous approval of the Central Government to each proposal made, be expended upon any of the following objects, namely:—

- (i) On the construction of new roads and bridges of any sort;
- (ii) On the reconstruction or substantial improvement of existing roads and bridges;
- (iii) In special cases, on the maintenance of roads and bridges, constructed, reconstructed or substantially improved from the Road Fund or from loans approved or sanctioned by the Central Government;
- (iv) to meet charges, including the cost of establishment connected with the preparation of schemes of road development or with the administration of State Boards of Communications;
- (v) to meet charges including the cost of establishment connected with control of motor transport; and
- (vi) on the interest and amortization of loans approved or sanctioned before the date of this Resolution by the Central Government, and spent or to be spent on the construction, reconstruction or substantial improvement of roads and bridges.

8. In considering proposals for the construction, reconstruction or improvement of roads and bridges from the Road Fund, the Central Government shall have regard to the present urgent need for improving the efficiency and reducing the cost of transport by road of agricultural produce to markets and railways.

\*9 (1) A Standing Committee for Roads shall be constituted consisting of:—

- (a) the Minister-in-charge of Transport who shall be ex-officio Chairman, the Minister of State for Transport who shall be ex-officio Vice-Chairman, and the Minister of State for Parliamentary Affairs who shall be ex-officio member.
- (b) 15 members selected by the members of Parliament from themselves; and

(c) the Chief Commissioner of Railways.

(2) In the absence of the Chairman and the Vice-Chairman, the members present at any meeting may elect one of themselves to act as Chairman of the meeting.

(3) No approval to any proposal for expenditure from the Road Fund shall be given by the Committee unless it is supported by a majority of the members present and voting.

(4) All proposals for expenditure from the Central Reserve and all other proposals for expenditure from the Road Fund to be made in the State shall be referred by the Central Government to the Standing Committee before the proposals are approved:

Provided that the amounts in the Special Reserve shall be applied only to the purposes for which they are earmarked.

\* 10. The functions of the Standing Committee shall be:—

(a) To consider the annual budget and account of the Road Fund.

(b) To advise upon all proposals for expenditure from the Central Reserve;

(c) To advise upon the desirability of all other proposals involving expenditure from the Road Fund in the State.

(d) To advise upon proposals for the resumption of monies held by the Central Government as provided in subparagraph (3) of paragraph 3 of this Resolution; and

(e) To advise the Central Government generally on all questions relating to roads and road traffic which the Central Government may refer to the Committee.

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\* The Committee ceased to function after 1951-52 in accordance with a policy decision of the Government of India to discontinue all Standing Advisory Committee of Parliament.

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APPENDICES I to III

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## APPENDIX I—(TRANSPORT TERMINOLOGY)

### (a) TERMS IN AIR-TRANSPORT

1. *Passenger*  
A person occupying a separate seat on a one-way trip.
2. *Passenger kilometre*  
The transportation of one passenger over one kilometre.
3. *Available seat kilometres*  
Seats available for the transportation of passengers multiplied by the kilometres flown on each inter-station flight.
4. *Passenger load factor*  
Ratio of passenger kilometres flown to available seat kilometres.
5. *Tonne kilometre*  
The transportation of one tonne of goods over one kilometre.
6. *Capacity available*  
Load capacity available for the transportation of goods and passengers after deduction of the operating load of fuel and oil, crew, stewards, supplied etc. In other words, it is available transport capacity expressed in terms of weight. This is also termed as "Payload".
7. *Available tonne kilometres*  
Available load capacity multiplied by kilometres flown over each inter-sector flight.
8. *Revenue weight load factor*  
Ratio of revenue tonne kilometres performed to available tonne kilometres. This indicates capacity sold and capacity which could not be sold and was therefore, wasted.
9. *Passenger tonne*  
The weight of a passenger (including free baggage viz. 20 k.g.) has been assumed to be .09 Tonne.

## (b) TERMS IN RAIL TRANSPORT

### 1. Capital-at-charge

Capital-at-charge includes the capital outlay on worked lines but excludes that on railway manufacturing units and miscellaneous independent projects such as the Chittaranjan Locomotive Works, the Integral Coach Factory, the Diesel Locomotive Works, etc.

### 2. Working Expenses

Working expenses are the administrative figures of railway accounts representing true expenses of the railway system in an accounting period irrespective of whether the expenses have been disbursed. These are accordingly the sum total of the ordinary working expenses and the appropriation to the Depreciation Reserve Fund (and the Pension Fund from the 1st April, 1964 only); the amount of suspense and 'payments to worked lines' are not included.

### 3. Net Revenue

Net revenue represents the net earnings during an accounting period after meeting all the Revenue charges except the payment of dividend and of the fixed contribution of Rs. 125 millions from 1961-62 onwards in lieu of tax on passenger fares to General Revenues for transfer to the States.

### 4. Gross Traffic Receipts

Gross traffic receipts are gross earnings plus/minus the variation from the previous year's figures and the current year's figures of earnings awaiting realization.

### 5. Operating Ratio

Operating ratio represents the percentage of working expenses to gross earnings.

### 6. Net tonne kilometres

Net tonne kilometres means the movement over a distance of one kilometre on each gauge of the tonnage of the tonne of goods originating on each gauge of the railway, tonnes received from non-Government Railways, ferries or steamers and Railways in foreign countries, from the same gauges of other Government railways and from other gauges of the home railways.

### 7. Tonnes originating

Tonnes originating includes tonnes of all traffic originating on each gauge of the Government Railways system, whether these terminate on the gauge itself or on some other gauge of any railway (home or foreign). Each tonne of freight is counted once only on the originating railway irrespective of the number of gauges over which it is carried.

## 8. Route kilometres

Route kilometres represent the kilometrage of Railwayline owned by a Railway including its worked lines. Only single kilometrage of double lines and more than double lines is included. The kilometrage of tracts, crossings at stations and sidings is excluded.

## 9. Four-wheelers

Wagons are counted in terms of four-wheelers as under:—

1 six wheeler	= 1 four-wheeler
1 bogie	= 2 four-wheelers
1 Twelve-wheeler	= 3 four-wheelers
A bogie open high capacity B.G. wagon BODX type (combined central and side discharge)	= 3 four-wheelers
A bogie open high capacity B.G. wagons BODX type (side discharge and inclined floor)	= 3 four-wheelers
A bogie wagon BDX type carrying capacity 55.37 tonnes	= 2 four-wheelers
A bogie Hopper wagon B.G. KOH/BKH Non IRS type carrying capacity 65 tonnes	= 3 four-wheelers
A bogie open high sided B.G. wagon of high capacity BOX type	= 2½ four-wheelers
A bogie ballast hopper B.G. wagons BOB type	= 2½ four-wheelers
A bogie wagon BWL type carrying capacity 50 tonnes	= 2 four-wheelers
A bogie wagon BWT type carrying capacity 55 tonnes	= 2½ four-wheelers
A bogie wagon BWH type carrying capacity 90 tonnes	= 4 four-wheelers
A bogie wagon BWS type carrying capacity 130 tonnes	= 6 four-wheelers
A bogie rail high capacity B.G. wagon BRS/BRH type	= 2½ four-wheelers
A bogie open "Gondola" B.G. wagon of high capacity BOI type for iron ore	= 2 four-wheelers

## 10. Vehicle Kilometres per vehicle day

Vehicle kilometres per vehicle day denote the average number of kilometres run per coaching vehicle per day both loaded and empty journeys. Vehicle kilometres of coaching vehicles run on passenger and mixed trains are divided by the average number of passenger and other coaching vehicles on line multiplied by the number of days in the period concerned. Performance of coaching vehicles run on departmental trains and brake vans does not enter into the calculation of this result.

## 11. Wagon Kilometres per wagon day

Wagon kilometres per wagon day represent the average daily performance of a wagon in kilometres both loaded and empty journeys, and are arrived at by dividing total wagon kilometres by the average number of wagons on line (pooled and non-pooled) by the number of days in an accounting period. The performance and days of the departmental wagons and other stock excluded from the above figure are not taken into account in calculating this result.

Broad gauge : 1.676 metres.

Metre gauge : 1.000 metre.

Narrow gauge : 0.762 metre and 0.610 metre.

## (c) TERMS IN MOTOR TRANSPORT

### 1. MOTOR VEHICLE REGISTRATION

Motor vehicle registered means that a certificate to the effect that a motor vehicle has been duly registered by a competent authority in accordance with the provisions of Motor Vehicles Act has been issued. The Act provides that no person shall drive any motor vehicle and no owner of a motor vehicle shall cause or permit the vehicle to be driven in any public place or in any other place for the purpose of carrying passenger or goods, unless the vehicle is registered and the certificate of registration of the vehicle has not been suspended or annulled and the vehicle carries a registration mark displayed in the prescribed manner.

### 2. Motor Vehicle

Motor vehicle means any mechanically propelled vehicle adapted for use on road whether the power of propulsion is transmitted thereto from an external or internal source and includes a chassis to which a body has not been attached and a trailer; but does not include a vehicle running on fixed rails or a vehicle of a special type adapted for use only in a factory or in any other enclosed premises.

### 3. Public Service Vehicle

Public service vehicle means any motor vehicle used or adapted to be used for the carriage of passengers for hire or reward and includes a motor cab, contract carriage, and stage carriage.

4. Goods Vehicle

Goods vehicle means any motor vehicle constructed or adapted for use for the carriage of goods, or any motor vehicle not so constructed or adapted when used for the carriage of goods solely or in addition to passengers.

5. Motor Cab

Motor cab means any motor vehicle constructed, adapted or used to carry not more than six passengers excluding the driver, for hire or reward.

6. Motor Car

Motor car means any motor vehicle other than a transport vehicle omnibus, road roller, tractor, motorcycle or invalid carriage.

7. Motor Cycle

Motor cycle means a two-wheeled motor vehicle, the unladen weight of which, inclusive of the unladen weight of any detachable side car, having an extra wheel, attached to motor vehicle, does not exceed 600 kilograms.

8. Trailer

Trailer means any vehicle other than a side-car drawn or intended to be drawn by a motor vehicle.

9. *Plut Size*.—The vehicles of various types held by an Organisation for operation, including those proposed to be scrapped but not actually scrapped from its fleet.

10. *No. of Vehicles in scheduled services*.—Number of vehicles of each type in Scheduled and extra services as per Time Tables in force come under this category.

11. *No. of Buses under Repairs*.—

(i) *Major Repairs*.—The repairs usually coming under the purview of the Divisional, Regional and Central Workshops are reckoned as major repairs. Vehicles under such repairs are said to be under major repairs.

(ii) *Minor Repairs*.—The repairs usually coming under the purview of depots and garages are reckoned as minor repairs and vehicles under such repairs are said to be under minor repairs.

12. *Traffic stops*.—These refer to the number of vehicles held by an organisation after extracting from the fleet the vehicles in scheduled services, and major and minor repairs and those routing periodical inspections.



### 13. *Payor and activities (in Kms).—*

- (i) *Remunerative Kms.*—Total remunerative Kms. operated by vehicles.
- (ii) *Dead Kms.*—Total non-remunerative Kms. operated by the passenger buses. This refers to inchypro of Kms. as operated by a vehicle from a Depot or Garage or yard, refuelling point, or that operated by relief vehicle in case of breakdowns etc. The Kms. operated by the vehicles transferred from one unit to other unit for expansion or such other purposes are also to be considered as dead kms.
- (iii) *Gross Kms.*—Total of remunerative and dead Kms.
- (iv) *Departmental Kms.*—The Kms. operated by the bus or truck or any other departmental vehicle on account of departmental work other than normal operation, such as carriage of stores or fuel, survey work, inspection etc. constitutes departmental kilometres.

14. *Break down.*—Stoppage of a vehicle on the road due to mechanical defect for which time to re-start is 30 minutes in the case of the inter-city service and 15 minutes or more in the case of city service, is taken as a breakdown.

### 15. *Accidents:—*

- (i) *Major.*—Accidents involving death or grievous bodily injury and or loss of and damage to property exceeding Rs. 500 (while reporting accidents under this head, fatal accidents should also be included in the category).
- (ii) *Minor.*—Accidents involving simple bodily injuries or loss of and or damages to property exceeding Rs. 50 but not exceeding Rs. 500.
- (iii) *Other.*—All other accidents.

16. *Punctuality.*—Trips delayed by more than 15 minutes in inter-city service and 5 minutes in city services are to be considered 'delayed'.

### 17. *Gross Revenue:—*

- (i) *Traffic.*—To represent earnings realised from (a) passengers, (b) casual contracts, (c) reservations, (d) parcel service and (e) luggage carried in the case of passenger operations; earnings from (a) scheduled services; (b) chartered vehicles, (c) contract services as also charges from (a) demurrage and (b) wharfage in the case of goods operations and earnings from fare in the case of taxi operations.
- (ii) *Others.*—To represent the revenue from (a) sale of scrap, (b) advertisement, (c) out agency services, (d) postal receipts and (e) miscellaneous receipts.

18. *Cost of Operations*.—It will include actual expenditure on personnels, material, depreciation, interest on capital and overheads. The cost of material purchased during the period under report has not to be mistaken with the cost of actual consumption during that period.

19. *Load Factor*.—It is the ratio of seat Kms. occupied to seat Kms. offered during a period by an undertaking. Alternatively, it is the ratio of actual earnings to expected earnings. Earnings from passenger journeys will only be included, leaving the earnings from luggage, mails, etc.

20. *Cost of personnel*.—Location is to be the deciding factor, for example, the cost of staff whether supervisory, executive or clerical working in workshop would be debited to the head "Maintenance & Repairs" and not under the head "Administration". This criteria will also be used in working the vehicle staff ratios.

#### (d) TERMS IN PORT TRANSPORT

1. *D.W.T. (Dead Weight Tonnage)*.—It is the weight in long tons of cargo, passengers, fuel and stores which a ship carries when fully loaded down to the load line. It represents the actual carrying capacity of a ship.

2. *G.R.T. (Gross Registered Tonnage)*.—It is the entire cubical capacity of a ship.

3. *N.R.T. (Net Registered Tonnage)*.—The cubic capacity of a ship intended for revenue carrying. 100 Cu. ft. is the standard space taken as the accommodation for one ton of goods.

4. *Berth-day*.—A day of occupations of a berth (quay or Mooring) by a ship.

5. *Ship-day*.—A day spent in the harbour by a ship.

6. *Turn-round time*.—Time spent by ship in the process of entering port, discharging cargo, re-loading and leaving.

7. *Ship-day lost*.—A day lost by a ship delayed (on account of non-availability of berth).

8. *Light-dues*.—A levy of the Lighthouses, Department on a ship entering an Indian port.

9. *Port dues*.—A levy of port authority on a ship.

10. *Pilotage*.—A port charge for guiding a ship in or out of a harbour through channels, passages or other waters by an authorised pilot.

11. *Berth-fee*.—A port charge on ship for the occupancy of a

12. *Wharfage*.—A port charge on the ship for all cargo conveyed on over, or through a wharf/berth. It is called harbour dues, in Madras and landing in Visakhapatnam.

13. *Craneage*.—The hire charges for providing a port crane for cargo handling.

14. *Lighterage*.—The charges of the owner of barges and lighters for the transshipment of a ship's cargo in the strim (instead of alongside berth).

15. *Traffic Flow*.—A vector with magnitude and direction, such as passengers embarked/dismarked or cargo exports/imports.

16. *Traffic*.—A scalar with only magnitude but no direction such as the sum total of exports and imports of cargo.

17. *Cargo traffic at ports*.—Excludes bunker coal; and bunker oil, unless otherwise stated.

18. *Output-rate, of labour*.—Cargo-handling rate of port or dock labour per shift of 8 hours (excepting Bombay Port where it is taken for 7 hours) for hook gang.

19. *Output per berth day*.—Total tonnage handled distributed over the total number of berth days.

20. *Jetty and bunker*.—It is a port facility for a ship in unprotected water with a landing facility and assured draft.

21. *Mooring*.—It is a port facility with assured draft but no landing facility.

22. *Berth*.—It is port facility with assured draft and landing facility.

### (c) TERMS IN SHIPPING

- |                               |  |
|-------------------------------|--|
| 1. <i>Load Line</i>           | The outer line on the body of a ship upto which she can submerge in water with safety. It varies according to the seasons and waters in which she plies. |
| 2. <i>Draft</i>               | The depth necessary to submerge a ship to her load line.   |
| 3. <i>Displacement light</i>  | The weight of a ship without stores, bunker fuel or cargo.   |
| 4. <i>Displacement Loaded</i> | The weight of a ship plus stores, bunker fuel, cargo and passengers.   |

5. *Cargo tonnage* . . . . . It refers to the earning cargo of a ship and is expressed as either a weight or measurement. The weight ton in the USA is the short ton of 2000 pounds (or 40 cubic feet) in the British countries the long ton of 2240 pounds (or 40 cubic feet), and under the metric system in India the metric ton of 1000 kg., or cubic metre.
6. *Ballast* . . . . . Any material intended to provide stability to the ship.
7. *Bunker* . . . . . Ship-space for storing fuel (coal, oil etc.).
8. *Liners* . . . . . Ships that ply on a regular scheduled service between groups of ports. The ship of a liner company are common carrier offering cargo space or passenger accommodation to all shippers and passenger who require them. A liner company is generally engaged on trade routes where large volume of passenger or cargo traffic is available.
9. *Freighters or cargo lines* . . . . . Ships designed to carry general cargo (with a limited passenger accommodation operating on fixed routes with fixed sailing schedules and serving a group of ports.
10. *Tramps (or general traders)* . . . . . Cargo ships operating in all parts of the world without a fixed route and sailing schedule in search of primarily bulk cargo carried generally in ship-loads.
11. *Tanker* . . . . . A specialised cargo ship designed to deal with bulk liquid cargoes permitting quick loading and discharge, thereby ensuring fast turn-rounds so essential to good utilisation. They generally return in ballast as it is seldom possible to obtain return cargoes.
12. *Oil Ore and bulk carrier* . . . . . A bulk cargo ship designed to carry ore and oil enabling her thereby to be loaded in both directions.
13. *Collier* . . . . . Generally a coastal ship designed to carry coal.

14. *Coaster* . . . . An all purpose cargo carrier, operating around our coasts. Both coasters and colliers are subject to serve completion from inland transport.
15. *Roll-on roll-off vessel* . . . . It is frequently called a vehicle ferry. It is designed for the conveyance of road haulage vehicles and private cars. At each terminal ports, a ramp or link span is provided enabling the vehicle to drive on or off the vessels, thereby eliminating craning and cargo handling (and also pilferage) and permitting a quick turn-round of the ship.
16. *A liner Conference* . . . . An organisation whereby a number of ship-owners offer their services on a given sea route on conditions agreed by the members. A conference line is a vessel of a ship-owners belonging to such a shipping conference.
17. *Voyage and Time charter rates* . . . . A voyage charter is a contract for a specific voyage, while a time charter is for a period of time which may cover several voyages. A voyage charter rate is thus a short term rate and time charter rate is a long term rate.
18. *Stowage factors* . . . . Stowage factor is the space occupied in cubic feet in the ship's hold by one ton of cargo (2240 lbs.).

Stowage plan is an outline plan of the ship upon which is entered the stowage position of all cargo. It helps the stevedore in charge of the discharging and loading and responsible to the Master of the ship to make stowage arrangements in advance. The stowage factors for certain commodities may be given as follows :

	Nature of packing	Stowage factor	Ship-type to which suitable for carriage
(1)	(2)	(3)	(4)
Apples	Cases or barrels	About 80	Fruit carriers/cargo liners.

(1)	(2)	(3)	(4)
2 Butter	Cases, boxes, or bags	55=60	Cargo liners with refrigeration facility.
3. Cement	Bags, containers, or in bulk.	35=40	Most suitable for single deck vessels.
4. Coal	..	35=50	Tramps/coast-wise colliers vessels with single deck, large hatches and self trimming holds.
5. Coffee	Bags/chests	60	Cargo liners.
6. Confectionary	Cartons	High stowage factor	Liner services.
7. Copra	Bales/Bags/Bulk	75=80	Shelter deck vessels.
8. Cotton	Pressed Bales	50=100	Shelter deck vessels.
9. Eggs	Crates/cases	High stowage factor.	Vessels with refrigerator accommodation.
10. Esparto grass	Bales	100=150	Shelter deck vessels.
11. Fertilisers	Bulk/Bags	Varies with variety.	Single deck vessels when conveyed in bulk and tween deck vessels when despatched in bags.
12. Flour	Bags	50	Tween deck vessels.
13. Heavy grain (Wheat malet & rye)	(1) Bulk (2) Bags	Approx 50 (50+10% for bags).	Single deck vessels with self-trimming holds Do.
14. Lighter grains (barely, oats & linseed).	(1) Bulk (2) Bags	55+85 55-85+10% for bags.	Single deck vessels with self trimming holds. Do.
15. Jute	Bales	58	Liners.
16. Oilcakes	Bulk/Bags	55	Single deck vessels when carried in bulk, tween deck ships when despatched in bags.

(1)	(2)	(3)	(4)
17. Oranges . . .	Crates	About 65-75	'Tween deck vessel
18. Ores . . .	Bulk	12-30	Trams/specialised single deck ore carriers.
19. Rice . . .	Bags	50	'Tween deck vessel
20. Rubber . . .	Bags/bales/cases	65-75	Liners (Latex in deep tanks)
21. Salt . . .	Bulk/Bags	35	Single deck vessels
22. Steel Rails . . .	Loose/Bundles	12	Single deck vessels when despatched in bulk consignment. Cargo liners when despatched in small consignments.
23. Sugar . . .	Bulk (raw) Bags (raw & refined).	40-50	Single deck sugar carriers when despatched in bulk 'tween deck vessels when in bags.
24. Tea . . .	Lined Cases	About 65	Liner tonnage.
25. Timber, Hard-woods (Teak and Mehegany Pit props) DBB (Doels, Battens & Boards)	...	35-30 60  About 90	Single deck three island-type with well decks and abroad beam.
26. Tobacco . . .	Hogs/heads/Bales/Cases	...	'Tween deck vessel.
27. Wines . . .	Drums/Barels	...	Cargo liners.
28. Wool . . .	Pressed bales large bags.	180-280	Shelter deck vessel.

## APPENDIX II

### SELECTED TECHNICAL PAPERS RELATING TO ROADS PUBLISHED BY THE INDIAN ROADS CONGRESS

Sl. No.	Name of Paper	Name of Author	I.R.C. Journal No.
(1)	(2)	(3)	(4)
<i>I. Roads in General</i>			
1.	Safe Wheel Load for Indian Roads	Raja Ram	III**
2.	Corrugations on Road Surfaces	C.B.E. Trustcott	IV**
3.	Ribbon Development	A.S. Trollip	V**
4.	The board Classification of Traffic and Contributory Causes of Wear and Tear of Roads.	Sir Kenneth Mitchell	VIII**
5.	Cycle Tracks	Fatch Chand	X***, 3 & 4
6.	Adequacy Assessment of Highways	D. G. Bhagat	XXIII-1 & 4
7.	Crystal Pattern Formula for Integrated Highway Planning in India.	K. C. Mital	XXIV-2 & 5
8.	Regional Concept for Highway Planning—The Web and Lattice Pattern.	D. C. Bhagat	XXIV-4 & 5
<i>II. Road Surveys, Design, Layout and Construction</i>			
1.	Optimum weight of vehicles on Extra municipal Roads.	K. G. Mitchell	III**
2.	Calculation of the Structure of Roads	Brigadier Laog Anderson	I
3.	Fundamentals of Highway Needs and Highway Planning.	D. G. Bhagat & Jagdish Bahadur	I

\*\* Bound Volume out of stock.



(1)	(2)	(3)	(4)
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*III. Soil and Earthworks, Soil Science as adopted to Road Foundation, Banks and Earth Surface, Soil Stabilization, etc.*

1. Earth Road Construction and Maintenance by Machinery.	G. W. D. Brecken	I**
2. Roads in Rural Areas (village roads)	Chowdhary Lal Chand	II**
3. Road Construction in Black Cotton Soils	A. Nageswara Ayyer	X***-1 & 4
4. Road Construction Practice in Sandy Areas in Madras	K. Ramaswamy Reddy & S. Radhakrishnan	XXXVII-3
5. A Resume on the Stabilization of sand.	H. L. Uppal & B. D. Bhalla	XXIV-2

*IV. Water-Bound Macadam Roads and other Low Cost Roads such as Mcorum, British and other forms of Trackways.*

1. Gravel Roads	N. N. Ayyangar	II**
2. Roads under Local Bodies and How to Maintain them.	Fatch Chand	IV**
3. Some Notes on the Maintenance of Water-Bound Macadam	A. L. Rao	VIII**
4. Low Cost Roads for the East	Col. F. L. D. Woolton	XII-3 & 4

*V. Tar and Bitumen Surfacing Carpets, etc*

Asphalt Roads	G. G. C. Adams	I*
The Road Problem in India with some Suggestions	Col. C. E. Sopwith	II**
3. An Economical Substitute for Water bound macadam	A. L. Rao	VI**

\*Awarded Medal.

\*\*Bound Volume out of stock.

(1)	(2)	(3)	(4)
4.	Revised specifications for Bitumen Roads in the Punjab.	Abdul Aziz	VIII**
5.	Modern Development in Road Tar Research.	P. M. Verma	XXVII-2
6.	Fundamentals of Flexible Pavement Design.	N. Sen	XXIV-4
<i>VI. Concrete</i>			
1.	Trackways for Rural Road Development.	Sir K. G. Mitchel	VII**
2.	A Review on "Modern Road Construction in concrete.	Lt. Col. W. P. Andrews.	XIII**1
3.	Cement Grouted Roads	E. A. Nadirshah	XIX-2
4.	Report of the Panel Discussion on cement concrete Road Surfacing.	Bh. Subharaju & BY. C. Gokhale.	XXIII-2
5.	Investigation into causes of cracks in certain concrete pavements.	S. K. Bose	XXIV-1 & 5
<i>VII. Miscellaneous Material and Process, Aggregates, Tests, Sizes, etc.</i>			
1.	A Report on Bridges and Bridge Engineering in Canada.	S. I. Bazaz	XVI**3
2.	The Investigation, Design and construction of the Cauvery Bridge at Pugalur.	K. K. Nambiar & K. Namasivayam	XVII**1
3.	Bridging India's Rivers—An account of some of the Bridges built under National Highway Scheme.	Indian Roads Congress.	XVII**3
4.	The Design of Small Bridge and Culverts.	Goverdhanlal	XVII**2 & 4
	Timber Bridges in Kashmir	V. B. Manerikar & I. K. Naik	XX**2 & 4
6.	Indian Bridges	Y. Guyon	XXI**4

\*\* Bound Volume out of stock.

(1)	(2)	(3)	(4)
7.	The Investigation, Design and construction of Submersible Bridges.	D. Johnson Victor	XXIV**.-1
8.	Ultimate Load Carrying capacity of composite Beams.	P. C. Varghese	XXIV-3
9.	Study on the Stability of Well Foundation for Major Bridges	A. Banerjee & S. Gango Padhyay	XXV**.-2 &
10.	Standard Specifications and Code of Practice for Road Bridges, Section VI—Composite Construction for Road Culverts and Medium Span Bridges.	Bridges Committee	XXXVI**.-2 &
11.	Rubber Bearings for Highway Bridges.	A. K. Mullick	XXIX**.-1

#### *VIII. Road Maintenance and Road Usages*

1.	Ways and Means of Improving the Bullock-Cart.	T. L. W. Moss	III**
2.	Steel Type Problem Unfolds	W. L. Murrell	VII**
3.	Proposals for an All India Survey of Bullock-carts by means of Random Sampling.	J. Vvsugar	VIII**
4.	Maintenance of Gravel (Moorum) Roads under Heavy Traffic.	B. B. Gupta	X**.-2 & 4
5.	Widths of Highway Pavements	Specifications Standard Committee	XI**.-1 & 4
6.	Glossary of Highway Engineering Terms.	Do.	XIV**.-3 & 4
7.	Glossary of Highway Engineering Terms and Hindi Equipments.	Do.	XIX**.-3 & 4

#### *IX. Administration and Finance*

1.	Roads in India and Australia—Our Difficulties and some Suggestions.	L. Murrell	VI
2.	Organisation of Bridging Activities	T. R. Nangea	XV.-2 & 4

\*\*Bound Volume out of stock

(1)	(2)	(3)	(4)
<i>X. Plant, Machinery and Apparatus</i>			
1. Technical Note No. 1-Selection of Plant for Collection and Loading of Shingle.	Col. R. S. Dalby	XII-2	
2. Technical Note No. 2A note on Road Rollers with particular reference to steam road roller.	Do.	XII*-1	
3. Technical Note No. 3 Earth-Moving Machinery for Roads	Central Roads Organisation	XIV-3	
4. Technical Note No. 4 Diesel Road Rollers manufactured in India.	R. S. Bhalla	XV-3	
5. A New Method of Supplying Indian Requirements of Bitumen for Blacktopped Roads.	W. A. Griffiths	XXI-3 & 1	

\*Bound Volume out of stock.

## **XL. SELECTED PAPERS OF I.R.C. ON SPECIFICATIONS STANDARDS, CODE OF PRACTICES ETC.**

### **A. Highway Kilometre Stones, Sign, Boards Etc.**

1. Type Designs for Highway Milestones (IRC : 1—1953 First Repr int).
2. Route Marker Signs for National Highways (in Metric Units) (IRC : 2—1968 First Revision).
3. Type Designs for Furulong and Boundry Stones (IRC : 4—1955).
4. Type Designs for Highway Kilometres Stones (IRC : 8—1969 First Revision).
5. Type Designs for Boundry Stones (IRC : 25—1967 in Metric Units).
6. Type Designs for 200-Metre Stones (IRC : 26—1967).
7. Standard Letters and Numerals of Different Heights for Use of Highway Signs (in Metric Units IRC : 30—1968).
8. Route Marker Signs for State Routes (in Metric Units IRC : 31—1969).
9. Standard for Vertical and Horizontal Clearances of Overhead Electric Power and Telecommunication Lines as Related to Roads (in Metric Units IRC : 32—1960).
10. Code of Practice for Road Markings (with Paints IRC : 35—1970)
11. Traffic sign (in Metric units)

### **B. Bridges and Culverts**

1. Standard Specifications & Code of Practice for Road Bridges Section I—General Features of Design (in M-KS—4th Revision IRC : 5—1970).
2. Standard Specifications & Code of Practice for Road Bridges Section II—Loads and Stresses (In Metric Units) (Second Revision IRC : 6—1966)
3. Recommended Practice for Numbering Bridges and Culverts (IRC : 7—1959).
4. Design Criteria for Prestressed Concrete Road Bridges (Post-Tensioned Concrete) (First Revision IRC : 18—1965).

5. Standard Specifications & Code of Practice for Road Bridges—Section III—Cement Concrete (Plain and Reinforced) IRC : 12—1966).
6. Standard Specifications & Code of Practice for Road Bridges—Section V—Steel Road Bridges (IRC : 24—1967).
7. Standard Specifications and Code of Practice for Road Bridges Section IV—(Brick Stones & Block Masonry) IRC : 40—1970).
8. Paper No. 167—"Design of Small Bridges & Culverts" by Govindhan Lal.
9. Paper No. 238—"Considerations in the Design & Sinking of Well Foundations for Bridges" by B. Balwant Rao & C. Muthuswamy
10. Bridge Loadings Round the World.
11. Modern Trends in the Design and Construction of Prestressed Concrete Bridges Around the World.
12. Bridging India 'Piers' Volume I.

#### C. Cement Concrete Roads

1. Standard Specifications & Code of Practice for Construction of Concrete (IRC : 15—1970).
2. Tentative Specifications for 4 cm. ( $\frac{1}{2}$  in.) Asphaltic Concrete Surfaces Course. (IRC : 29—1968).

#### D. Black Top Roads

1. Tentative Specifications for Priming of Base Course with Bituminous Primers. (IRC : 16—1965).
2. Tentative Specifications for Single Coat Bituminous Surface Dressing (IRC : 17—1965).
3. Recommended Practice for Bituminous Penetration Macadam (Full Group) IRC : 20—1966).
4. Tentative Specification for Two Coat Bituminous Surface Dressing (IRC : 23—1966).
5. Tentative Specifications for Bituminous Macadam (Base & Binder) Course (IRC : 28—1967).

#### E. Water Bound Macadam Roads

1. Standard Specifications and Code of Practice for Water Bound Macadam and Surface Treated Water Bound Macadam (First Reprint) (IRC : 19—1966).

## F. Traffic Census Surveys

1. Traffic Census on Non-Urban Roads (IRC : 1960).
2. Standard Procedure for Evaluation and Condition Surveys of Stabilised Soil Roads. (IRC : 33—1969).

## G. Wayside Amenities

1. Recommended Practice for Location and Layout of Roadside Motor Fuel Filling and Servicing Stations (First Revision IRC : 12-1-1967).  
Out—recopy (Words omitted).
2. Recommended Practice for Borrowpits for Road Embankments Constructed by Manual Operation (First Reprint IRC : 10—1961).
3. Recommended Practice for the Design and Layout of Cycle Track (IRC : 11—1962).
4. Tentative Specifications for the Construction of Stabilised Soil Road with Soft Aggregate in Areas of Moderate and High Rainfall (IRC : 2—1967).
5. Recommendations for Road Construction in Waterlogged Areas. (IRC : 34—1970).
6. Recommended Practice for the Construction of Earth Embankments for Road Works (IRC : 26—1970).
7. Guidelines for the Design of Flexible Pavements. (IRC : 37—1970).
8. Design Tables for Horizontal Curves for Highways. (IRC : 38—1970).
9. Standards for Road-Rail Level Crossings. (IRC : 39—1970).
10. A Policy on Roadside Advertisement.
11. Geometrics of Roads.
12. Road Drainage Practices Around the World.
13. A Policy on Roadside Advertisement.

## APPENDIX III

### (1) IMPORTANT MEASURES AND CONVERSIONS

NOTE — Measurements by weight would be of interest to the port while measurements by volume to the ships.

#### *Weight*

1 Tonne . . . . .	=0.98420 long ton.
1 Long ton . . . . .	=1.10231 short tons
1 Long ton . . . . .	=1.01605 Tonnes
1 Short ton . . . . .	=0.90718 Tonnes

#### *Linear*

1 Kilometre . . . . .	=0.62137 Mile
1 Mile . . . . .	=1.6093 kilometres
1 Cm. . . . .	=0.393701 inch
1 Inch . . . . .	=2.54 cms.

#### *Area*

1 Squarekilometre . . . . .	=0.38610 square mile
1 Squarekilometre . . . . .	=100 hectares
1 Hectare . . . . .	=2.471 acres

#### *Volume*

1 Cubic Metre of distilled water . . . . .	=1 Tonne (by weight) =1000 litres of water (by volume) =35.31 cubic feet.
1 Gallon . . . . .	=4.546 litres.
1 Bale of cotton lint (392 lbs) . . . . .	=0.17781 Tonne of cotton lint
1 Tonne of cotton lint . . . . .	=5.624 bales of cotton lint (392 lbs.)
1 Bale of jute (400 lbs) . . . . .	=0.181486 Tonne of jute
1 Tonne of jute . . . . .	=5.5116 bale of jute (400 lbs.)



## (2) CONVERSION RATIOS BETWEEN AGRICULTURAL RAW MATERIALS AND PROCESSED PRODUCTS

### *Rice*

Rice(cleaned) production . . . = 2/3 of paddy production.

### *Cotton*

Cottonlint production . . . = 1/3 of kapas production.

Cottonseed production . . . = 2/3 of kapas production.

Cottonseed production . . . = 2 times of cottonlint production

### *Jute*

100 yards of hessian . . . = 54 lbs of raw jute.

4148 yards of hessian : . . . = 1 ton of raw jute.  
= 5.6 bale of raw jute (of 400 lbs each).

1 ton of sacking . . . = 1.11 tons of raw jute.  
= 6.22 bales of raw jute (of 400 lbs. each).

1 ton of hessian, sacking, e.t.c. . . = 1.05 tons of raw jute.  
= 5.9 bales of raw jute (of 400 lbs. each).

### *Groundnut*

Kernel to nuts in shell . . . = 70%

Oil to nuts in shell . . . = 28%

Oil to kernels crushed . . . = 40%

Cake to kernels crushed . . . = 60%

### *Mustard*

Oil to seeds crushed . . . = 33%

Cake to seeds crushed . . . = 67%

### *Seed*

Oil to seeds crushed . . . = 37%

Cake to seeds crushed . . . = 63%

### Copra seed

Oil to seeds crushed . . . . .	= 14 to 18%
Cake to seeds crushed . . . . .	= 82 to 86%

### Copra nuts

Copra to nuts . . . . .	= 1 ton of copra = 5773 nuts
Oil to Copra crushed . . . . .	= 6 $\frac{1}{2}$ %
Cake to copra crushed . . . . .	= 33%

### Cashew nuts

Cashew kernel . . . . .	= 25% of cashew nuts.
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### Lar

Seed lac . . . . .	= 65-70% of stick lac
Shellac . . . . .	= 37-4% of stick lac or 57-60% of seed lac

# AGRICULTURAL RAW PRODUCTS

## SOURCE OF DATA

1. Ministry of Finance, Govt. of India.
2. Central Statistical Organisation, Deptt. of Statistics, Govt. of India.
3. Planning Commission, Govt. of India.
4. Director General of Technical Development, Govt. of India.
5. Chief Controller of Imports & Exports, Govt. of India.
6. Ministry of Railways, Govt. of India.
7. Directorate General of Civil Aviation, Govt. of India.
8. Director General of Shipping, Bombay.
9. Department of Petroleum & Chemicals, Govt. of India.
10. Major Port Trusts.
11. State Port Officers.
12. State/Union Transport Undertakings.
13. Hindustan Shipyard Ltd., Visakhapatnam.
14. Central Inland Water Transport Corporation Ltd.,—Calcutta.
15. State Public Works, Departments.
16. Transport Departments of State Govt./Union Territories.
17. State/Central Budgets.
18. Shipping Development Fund Committee, Ministry of Shipping & Transport, Govt. of India.